DOCUMENT RESUME

ED 164 487 95 SP 013 441

TITLE	The State of Teacher Education 1977. Sponsored Report Series.
INSTITUTION	Lewin and Associates, Inc., Washington, D.C.
SPONS AGENCY	National Center for Education Statistics (DHEW), Washington, D.C.
PUB DATE	77
CONTRACT	OEC-0-74-9279
NOTE	128p.; Light type may not reproduce clearly
EDRS PRICE	MF-$0.83 HC-$7.35 Plus Postage.
DESCRIPTORS	*Educational Assessment; Educational Finance; Educational Planning; Educational Programs; *Preservice Education; *State of the Art Reviews; *Surveys; Teacher Characteristics; *Teacher Education; Teacher Supply and Demand

ABSTRACT

This report is a summary of the National Survey of the Preservice Preparation of Teachers. It presents data on the condition of preservice teacher education and summarizes future planning activities now underway in teacher education institutions. Information is provided on the perceptions of various groups regarding the supply and demand for teachers, on the programs offered, and on the costs. Several problem areas in teacher education are illuminated. Five major topics are examined and discussed: (1) teacher supply and demand; (2) fiscal issues in teacher preparation; (3) professional trends; (4) demographic characteristics of recent graduates from teacher education programs; and (5) experimental developments and their impact on teacher preparation. A technical description of the study is appended. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Sponsored Report Series

THE STATE OF TEACHER EDUCATION 1977

JAN 17 12 18 AM '79

ED164487

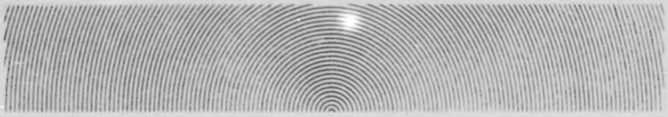
U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

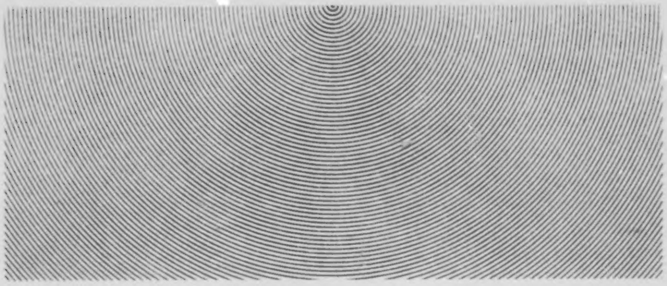
SP013 441

National Center for Education Statistics

SPONSORED
REPORT
SERIES



THE STATE OF TEACHER EDUCATION 1977



Project Officer
Shirley A. Steele
National Center for
Education Statistics

This report was prepared by Lewin and Associates, Inc., under Contract Number OEC-0-74-9279 with the National Center for Education Statistics. Contractors undertaking such projects are encouraged to express freely their professional judgment. Therefore, the material selected for this report does not necessarily represent positions or policies of the National Center for Education Statistics.

An earlier version of this report was distributed under the title of *The Condition of Teacher Education.*

FOREWORD

As Chairman of the Advisory Panel on the National Survey of the Preservice Preparation of Teachers (NSPPT), I have the pleasure of submitting the report of the study. We commend it to the attention of the National Center for Education Statistics and to the various groups who have strong interest in the preparation of teachers. These local, State, and national organizations, including parent and public interest groups, can find important information in the report that merits careful attention and appropriate action. Some of these groups will formulate policy implications from various viewpoints as they review the report.

This report is a summary of the NSPPT. It presents data on the condition of preservice teacher education and summarizes future planning activities now underway in teacher education institutions. Information is provided on the perceptions of various groups regarding the supply and demand for teachers, on the programs offered, and on the costs. The study began with an investigation into the issues surrounding teacher training and the information needs of key decisionmakers who influence the direction of preservice training at the Federal, State, and local levels. Based on this investigation, four survey instruments were designed and administered to a nationwide probability sample of institutions (including programs), faculty, and students. Data collection was completed in May 1976. Several in-depth reports on supply, program characteristics, financing, and students have been prepared and are referenced, integrated, and summarized in this report.

This survey has illuminated several problem areas in teacher education that have heretofore lacked reliable information and has demonstrated the need to gather data on a continuing basis. It is expected that this report will be useful to those involved in planning and conducting programs of teacher education and to those concerned with policy decisions in this area.

This NSPPT was conducted by Lewin and Associates, Inc. of Washington, D.C. under the general direction of Mr. Vello A. Kuuskraa, assisted by Mr. J. P. Brashear and Ms. Margaret Webster, and the technical direction of Mr. Frank Morra, Jr. The University of Virginia (led by the late Dr. Malcolm Provus) and the Stanford Center for Research and Development in Teaching (led by Dr. Bruce Joyce) served as subcontractors to the study.

Ralph W. Tyler
Chairman

TABLE OF CONTENTS

Page

INTRODUCTION 1

I. TEACHER SUPPLY AND DEMAND 5
  A. Background 5
  B. The Current Supply 7
  C. Surpluses and Shortages 9
  D. The Adjustment Mechanisms 14
  E. Summary and Conclusions 24

II. FISCAL ISSUES IN TEACHER PREPARATION 26
  A. Introduction 26
  B. Shifts in the Distribution of Graduates Prepared to Teach 27
  C. Apparent Reasons for Shifting Enrollment 30
  D. Impact of Shifting Enrollments 37
  E. Trends in Tuition Revenues 41
  F. The Near Future 43
  G. Summary 45

III. STRIVING TOWARD A PROFESSION 47
  A. Background 47
  B. Protracted Professional Education 49
  C. Standards for Admission 52

Page

D. Basis in the Disciplines 55

E. Body of Knowledge 62

F. Field Experiences 64

G. Personal Motivation 68

H. Summary 70

IV. DEMOGRAPHIC CHARACTERISTICS OF RECENT GRADUATES FROM TEACHER EDUCATION PROGRAMS 71

A. Sex, Age, and Geographic Background 71

B. Ethnic Background 71

C. Family Background 74

D. Participation by Minorities Across Fields of Training and Types of Institutions 74

E. Linguistic Capabilities 78

V. EXPERIMENTAL DEVELOPMENTS AND THEIR IMPACT ON TEACHER PREPARATION 80

A. "Reality" Education 81
  1. Teacher Centers 82
  2. Early Field Experiences 86
  3. Microteaching 88

B. Competency-Based Education 91
  1. Presence of Statements of Competencies 91
  2. Nature of Competency Statements 92
  3. Faculty Resources Available for Competency-Based Education 94

C. Instructional Technology 97
  1. Simulations 97
  2. Human Relations Training 98
  3. Video and Audio Recorders 100
  4. Techniques for the Analysis of Classroom Interaction 101
  5. Bloom's Taxomony of Educational Objectives 102

APPENDIX: Technical Description of the Study 105

LIST OF CHARTS

		Page
Chart 1	Supply and Demand for Beginning Teachers	10
Chart 2	Career Plans of Persons in their Final Year of Teacher Preparation by Father Occupation and Ethnic Background	11
Chart 3	Actual vs. Projected Supply of Teachers	12
Chart 4	Supply of Beginning Teachers by Area of Specialization	13
Chart 5	Faculty Perceptions of Supply/Demand for Beginning Teachers	15
Chart 6	Anticipated Three-Year Trends in Supply of Beginning Teachers	16
Chart 7	Number of Graduates from Teacher Education Programs by Method Used to Determine Program Size	18
Chart 8	Timing of Career Counseling as Reported by Persons in their Final Year of Teacher Preparation	20
Chart 9	Perceptions of the Labor Market for Trained Education Personnel as Reported by Persons in their Final Year of Teacher Preparation	21
Chart 10	Factors Affecting Student Choice of Careers in Teaching	22
Chart 11	Distribution of Graduates with Teaching Certificates by Control of Institution	28
Chart 12	Distribution of Graduates with Initial Teaching Certificates by Type of Institution	28
Chart 13	Factors Influencing the Decision of Teacher Candidates to Attend their Current Institution	31

List of Charts
Page 2

		Page
Chart 14	Comparative Costs of Teacher Education, AY 1975-76	33
Chart 15	Costs of Preparing to be a Teacher (National Averages), AY 1975-76	33
Chart 16	Percent of Students Reporting that Tuition Costs Were A "Very Important" Influence on their Choice of Institution, By Type and Control of Institution	35
Chart 17	Current Satisfaction of Teacher Trainees With Tuition Cost by Type and Control of Institution	36
Chart 18	Incidence of Deficits in Public and Private Institutions Which Prepare Teachers	39
Chart 19	Mean Tuition Charges, AY 1973-74 through AY 1975-76	42
Chart 20	Analysis of Anticipated Enrollment in Teacher Education Programs by Control of Institution	44
Chart 21	Ratio of Master's to Bachelor's Degrees Granted by Schools, Colleges, and Departments of Education	50
Chart 22	Intended Degree, Area of Training, and Part/Full Time Attendance Status of Persons Completing Teacher Education in AY 1975-1976 Who Plan to Pursue Graduate Training in Education	51
Chart 23	Factors in Admission to Teacher Preparation	53
Chart 24	Comparison of Teacher Education Seniors with the General College Population on CEEB Math and Verbal Tests	54
Chart 25	Analysis of Individual Faculty Time Devoted to R&D	58
Chart 26	Analysis of Institutional Allocation of FTE Faculty	60
Chart 27	Faculty Time Devoted to Research and Development in the Health Professions	61
Chart 28	Use of Formal Statements of Learning Objectives by Teacher Education Programs	63
Chart 29	Use of Competencies by Teacher Education Programs	63

		Page
Chart 30	Coordination Between Academic and Clinical Teacher Preparation	65
Chart 31	Total Clock-Hours in Clinical Requirements: 1968 vs. 1975	67
Chart 32	Timing of Clinical Requirements: 1968 vs. 1975	67
Chart 33	Values of Teacher Education Graduates Concerning Work and Teaching	69
Chart 34	Geographic Background of Teacher Graduates	72
Chart 35	Age Distribution of Teacher Graduates	72
Chart 36	Ethnic Background of Teacher Education Graduates	73
Chart 37	Family Background of Recent Teacher Education Graduates	75
Chart 38	Distribution of Beginning Teachers from Minority Background by Field of Specialization	76
Chart 39	Distribution of Minority and Non-Minority Beginning Teachers Across Institution-Types	77
Chart 40	Linguistic Capabilities of Recent Teacher Graduates	79

LIST OF TABLES

		Page
Table 1	Summary of Enrollment in and Graduates from Teacher Education Programs	8
Table 2	Average Semester-hours Required for Elementary and Secondary Teacher Training Programs	56
Table 3	Involvement of Institutions with Teacher Centers by Type of Institution and Location of Teacher Center	84
Table 4	Sources of Funding for Teacher Center by Location of Teacher Center	85
Table 5	Teacher Trainee Roles in Field Experiences by Year	87
Table 6	Extent of Use of Microteaching in Teacher Education Programs	90
Table 7	Predominant Definition of "Competency" or "Learning Objective" Used in Programs of Teacher Preparation by Field of Training	93
Table 8	Nature of Faculty Involvement With Competency-Based Teacher Education by Type of Institution	95
Table 9	Use of Simulations in Teacher Education	98
Table 10	Use of Human Relations Training in Teacher Education Programs	99
Table 11	Use of Video and Audio Recorders in Teacher Education Programs	100
Table 12	Use of Interaction Analysis Techniques in Teacher Education Programs	100
Table 13	Use of Bloom's *Taxonomy of Educational Objectives* in Teacher Education Programs	103

STATE OF TEACHER EDUCATION - 1977

SUMMARY REPORT

INTRODUCTION

Since the late 1950's, the education of teachers has held an increasingly prominent position on the public agenda. For over a decade, issues of quality of professional preparation, stimulated by studies by Conant and Koerner, yielded to the more pressing problem of providing the quantity of personnel needed to staff the schools. In time, the dominant problem of the 1960's -- the teacher shortage -- was solved, but the remedy has resulted in the widely publicized problem of the 1970's -- the teacher surplus. Although enrollments in teacher education are dropping, there is a reserve pool (composed of certified teachers who could not find employment in the peak surplus years), many of whom would enter the labor market if employment opportunities become available. Further, current sources* indicate that demand for teachers will remain low for many years in the future. Thus, the institutions which prepare teachers and the public officials charged with formulating and implementing education policy will face unprecedented challenges in directing the nation's scarce educational resources to meet the needs of America's children.

During the period of surplus, the keen competition to place graduates and the continuing quest for increased professional status for teachers have renewed interest in the quality of teacher preparation.

---

*c.f. DHEW/ASPE/NCES, Condition of Education - 1977, Chart 1.01

Teacher training institutions, however, have labored under the strain of dislocations in both the general economy and the labor market for teachers. Many have made the changes required to survive; some have closed their teacher preparation programs; others are struggling. Those that survive the declining demand for teachers are striving to improve the quality of the preparation of their graduates and to make teaching more accountable and efficient. As with issues of supply and demand, decisions concerning the direction and pace of efforts to improve the quality of preparation and professionalism rest with teacher training institutions and public officials.

The quantity of new teachers and the quality of their professional preparation are intimately related. The educators and policymakers who will decide the course of future teacher training require a comprehensive assessment of the current status and trends. The National Survey of the Preservice Preparation of Teachers (NSPPT)* was sponsored by the National Center for Education Statistics to provide such an assessment. This study employed four survey questionnaires which were administered to a nationally representative probability sample of 240 public and private institutions, 600 individual teacher preparation programs, 480 faculty, and 3600 students in their final year of pre-service training.

Comprehensive assessment of the condition of teacher education necessitated detailed inquiry into five central questions:

---

*The National Survey was conducted by Lewin and Associates, Inc., of Washington, D. C. and the Research and Development Center on Teacher Effectiveness of the School of Education, at Stanford University, in Fall 1975, under the sponsorship of the Education Manpower Statistics Branch of the National Center for Education Statistics.

1. Teacher supply and demand. What is the current and future market for trained education personnel? Has supply been adjusted to meet demand -- and what mechanisms have been used in making this adjustment? What are the prospects for maintaining a reasonable equilibrium?

2. Financial and survival conditions among teacher preparation institutions. Are schools, colleges, and departments of education financially viable? What changes are now emerging as a result of the drastic fiscal and enrollment changes of the 1970's? Are these changes in the long-term public interest?

3. Striving toward a profession. In what ways is teacher education acting on its concerns about the quality of the skills of new teachers? To what extent are the quality and accountability standards being achieved?

4. Characteristics of graduates of teacher training institutions. What types of people are entering the labor pools from which the nation's future teachers will be selected?

5. Innovative developments in teacher education. To what extent have new methods and techniques been adopted into the mainstream of teacher education?

This report summarizes the more important findings of the NSPPT with respect to each of these major questions. Companion reports are being prepared which describe the study and these findings in greater detail. These are:

Morra, F. and Kuuskraa, V. The Supply and Demand for Beginning Teachers (Washington, D.C.: Lewin and Associates, March 1977).

Brashear, J. P. and Morra, F., Financial Issues in Teacher Education (Washington, D.C.: Lewin and Associates, March 1977).

Morra, F. and Weber, M. The Structure and Content of Teacher Education Programs with special commentary by Paul Olson (Washington, D.C.: Lewin and Associates, March 1977).

I. TEACHER SUPPLY AND DEMAND

A. Background

Expansion of the school age population resulted in a persistent, nationwide shortage of trained teachers throughout the 1950s and 1960s. The "Great Society" programs of the mid-1960s extended the role of the schools to treating of social problems, creating a demand for teachers with special skills in affective and interpersonal domains and for teachers trained to deal with handicapped, disadvantaged, bilingual, and multi-cultural pupils. Through this period, teacher training institutions grew rapidly to meet the ever-growing demand for new teachers.

The expansions of the 1960s, however, were followed by difficulties in the 1970s:

- A declining birthrate reduced the need for new teachers, limiting job opportunities.
- Severe inflation and recession reduced the effective resources that would be available to education. The general public became less willing to invest increasing amounts of local resources in education. Bond issues were rejected, followed by demands for retrenchment.
- Teacher turnover decreased as teachers became reluctant to leave their jobs.

The expansion of teacher training institutions and the contractions of demand for new teachers converted the shortage to a surplus. By 1972, the size of the surplus became to be viewed with concern, particularly as projections were made to suggest a continuing oversupply throughout the decade. For example, in 1972, the Center for Priority Analysis of the National Planning Association, in a study sponsored by the NCES, wrote:

> For the period 1971 to 1979...there will be 3,201,711 graduates (with teaching certificates)... This would represent over 2,000,000 graduates prepared to teach in excess of the need ...*

Responses to the projected surplus of teachers by Federal and state governments, post-secondary institutions, and potential teachers have been varied. The Federal response was to curtail funding new teacher training programs, to contract existing programs, and to transfer priorities from pre-service to in-service training.** State responses ranged from imposing a quota system on schools of education or drastically reducing budgets to letting the local employment market perform the allocation function.*** As the data to be presented will show, institutions dropped or dramatically reduced enrollments in certain of the teacher preparation programs and individual students have begun to opt out of pre-service teacher preparation. The change was sudden and dramatic: in 1972, teacher preparation programs enrolled fully a third* of all undergraduates; by 1975, this proportion had dropped to about 20% -- and the total number of graduates has been reduced by approximately 100,000 per year.

---

* Kotz, A., Report on Quantitative Information on Teacher Training (Washington: National Planning Association), 1972, III, p. 2.

** For example, the Teacher Corps shifted its emphasis from pre-service to inservice training as early as 1972.

*** For example, the Utah State Legislature has allocated quotas of teachers to be prepared by all state-supported schools.

B. The Current Supply

The NSPPT examined public and private institutions in three classes:

- Universities. Institutions which offer undergraduate, graduate, and professional (e.g., law, medicine, dentistry) training.
- Comprehensive colleges. Institutions which offer undergraduate and graduate training with no professional training (the vast bulk of these institutions were once "teacher colleges", which expanded greatly during the period 1950-1970).
- Liberal arts colleges. Institutions which offer primarily undergraduate training with occasional graduate programs not exceeding the masters level.

Table 1 describes the numbers of institutions in each category and their enrollments and graduates during academic year 1975-76.

---

* DHEW/ASPE/NCES, Condition of Education - 1975.

TABLE 1

SUMMARY OF ENROLLMENT IN AND GRADUATES FROM TEACHER PREPARATION PROGRAMS AY 1975-76 AGGREGATE UNITED STATES

Institution Type	Number of Institutions	Full-Time Pre-Service Enrollment	Number of Grads With Teaching Certificates
All Institutions Combined	1,151	485,000	227,000
Control:			
Public	424	339,000	161,000
Private	727	146,000	65,000
Type:			
Universities	150	105,000	69,000
Comprehensive Colleges	438	300,000	124,000
Liberal Arts Colleges	563	80,000	34,000

Two important points about the current supply of new teachers are revealed in this table:

- Sixty-three percent of teacher training institutions are private, but these produce only 28% of the new teachers.
- Comprehensive colleges with 38% of the institutions produce nearly 55% of the new supply; universities with 13% of the institutions provide 30% of the supply. The balance of 15% of the new supply is provided by liberal arts colleges, even though they encompass nearly one-half the institutions.

C. Surpluses and Shortages

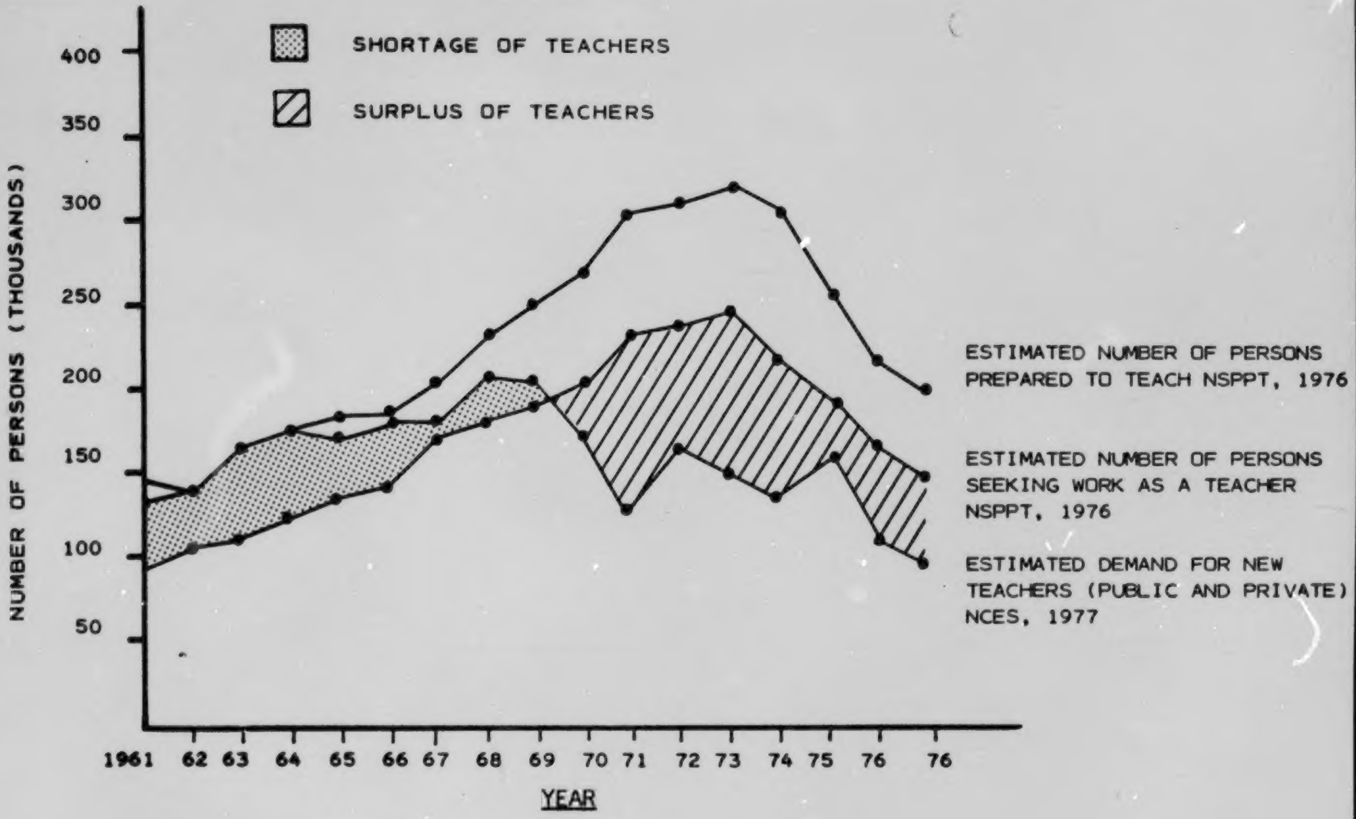
Contrasting this level of supply with current estimates of demand reveals that the period of surplus has not ended, although market dynamics and administrative decisions by educators and public officials seem to be responding to the imbalance.

- In aggregate, in 1976 the supply of beginning teachers exceeded demand by approximately 100,000 persons. This excess is half that observed in the most serious surplus year (1973).

- Early projections of drastic surpluses and persistent oversupply have proved to be in error. The supply of teachers, instead of increasing by 20 percent, has, in fact, dropped by 35 percent in the last five years (Chart 3). Many of the policy decisions which were made on the basis of these early projections should be reviewed in light of this new information. However, the excess of supply over demand remains large.

- The major changes in the supply of teachers have occurred in the areas of elementary and secondary education -- the fields most commonly associated with oversupply. Chart 4 shows that elementary and secondary education

CHART 1. SUPPLY AND DEMAND FOR BEGINNING TEACHERS. AGGREGATE UNITED STATES. 1961-1976



A SERIOUS IMBALANCE STILL EXISTS BETWEEN SUPPLY AND DEMAND FOR TEACHERS ALTHOUGH THE MARKET SEEMS TO BE REDUCING THE OVERSUPPLY, ALMOST 75000 ERSONS WHO ARE QUALIFIED TO TEACH WILL NOT FIND JOBS. OF THESE, ALMOST ONE-FOURTH WILL NOT EVEN ATTEMPT TO SEEK WORK.

NOTE: SUPPLY DATA FOR 1961-1971 SUPPLIED BY DR. WILLIAM GRAYBEAL OF THE RESEARCH DIVISION OF THE NATIONAL EDUCATION ASSOCIATION

CHART 2. CAREER PLANS OF PERSONS IN THEIR FINAL YEAR OF TEACHER PREPARATION BY FATHER OCCUPATION GROUP AND ETHNIC BACKGROUND. DATA ARE THE PERCENTAGE OF PERSONS IN EACH GROUP IDENTIFYING EACH OF THE CAREER ALTERNATIVES (SEE LEGEND) AS THEIR MOST LIKELY PURSUIT FOLLOWING GRADUATION OR CERTIFICATION AS A TEACHER. BASED ON A NATIONWIDE PROBABILITY SAMPLE OF 3600 PERSONS IN THEIR FINAL YEAR OF TEACHER PREPARATION AY 1975-1976

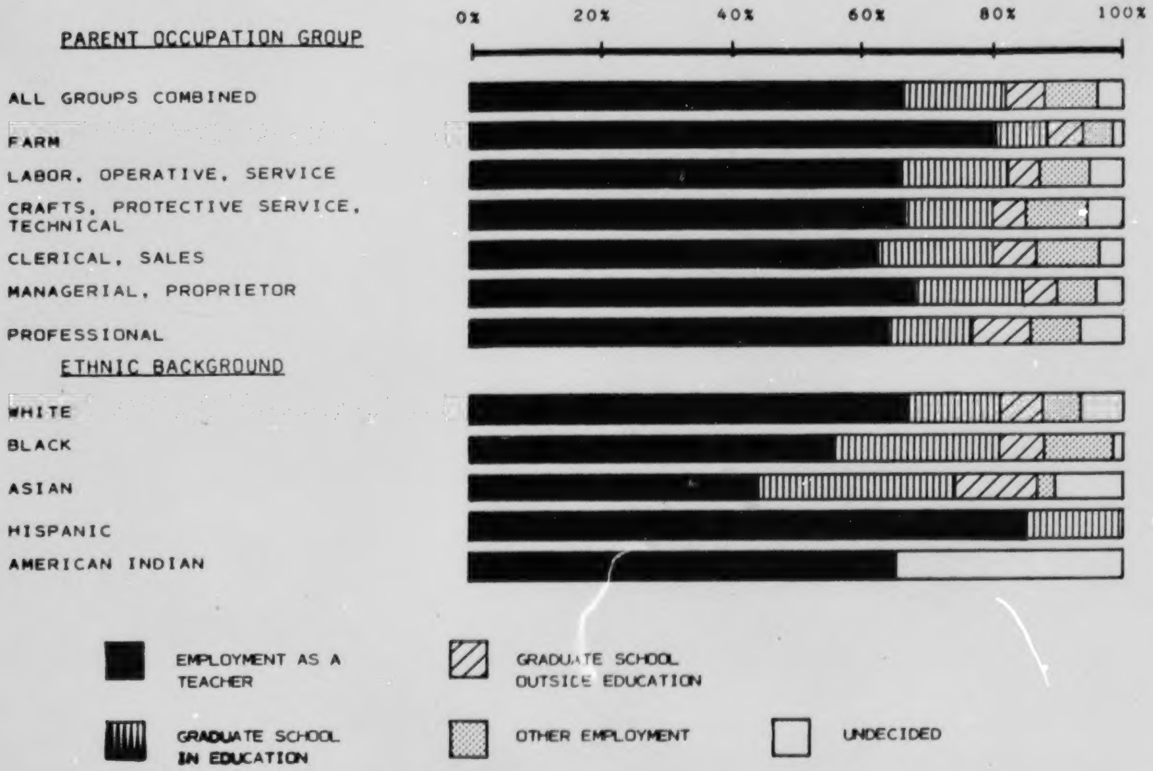
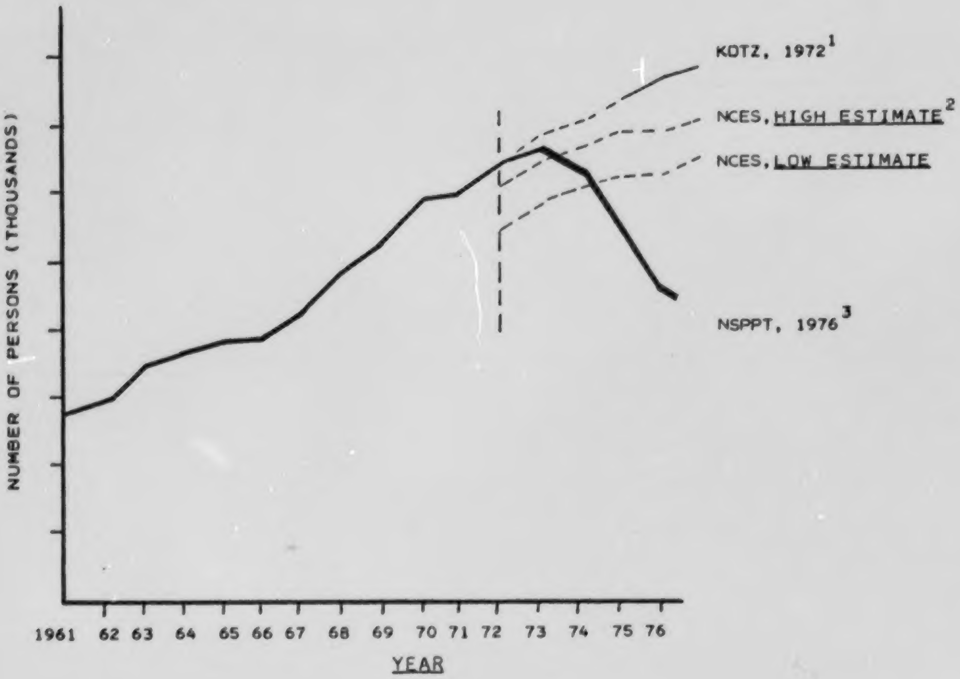


CHART 3. ACTUAL VS. PROJECTED SUPPLY OF TEACHERS



PRIOR PROJECTIONS OF MASSIVE INCREASES IN THE SUPPLY OF TEACHERS HAVE PROVED TO BE INACCURATE

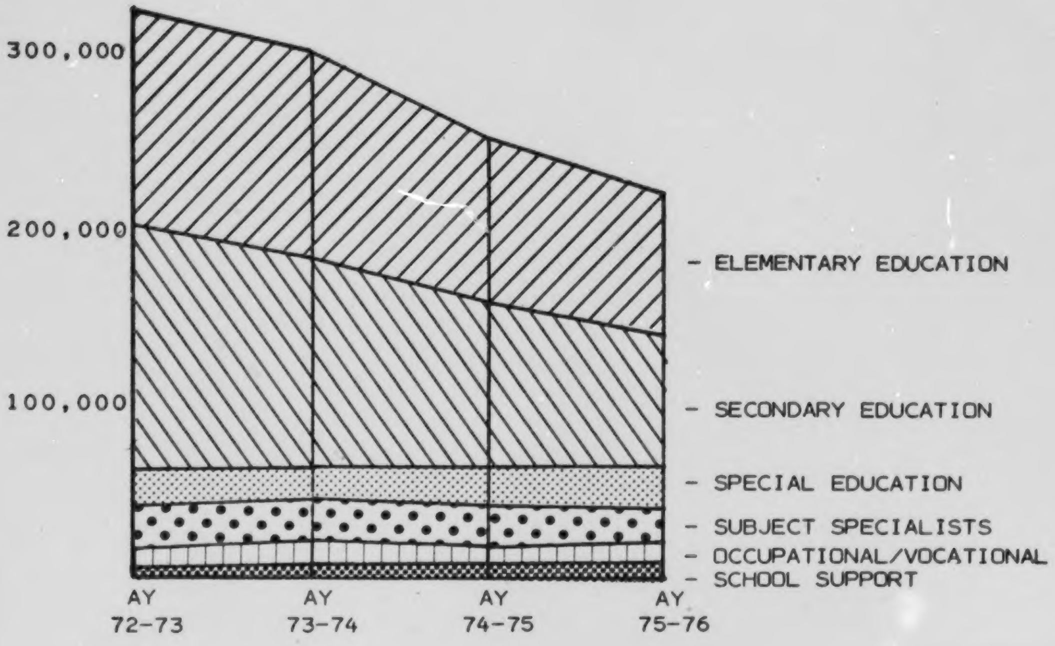
1. SOURCE: KOTE, A. ET. AL. QUANTITATIVE INFORMATION ON TEACHER TRAINING NATIONAL PLANNING ASSOCIATION, CENTER FOR PRIORITY ANALYSIS. PREPARED FOR DHEW/USOE/NCES APRIL 1972

2. SOURCE: U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, NATIONAL CENTER FOR EDUCATION STATISTICS. PROJECTIONS OF EDUCATION STATISTICS TO 1984-1985 1975 EDITION: PROJECTIONS ARE BASED ON ACTUAL DATA FROM 1972

3. SOURCE: F. MORRA AND V. KUUSKRAA SUPPLY AND DEMAND FOR TEACHERS: REPORT #1 OF THE NATIONAL SURVEY OF THE PRESERVICE PREPARATION OF TEACHERS (WASHINGTON, D. C.: LEWIN & ASSOCIATES, INC. 1977)

NOTE: THE NCES PROJECTS TRENDS IN EXISTING DATA. SUCH PROJECTIONS ASSUME NO CHANGES IN ENVIRONMENTAL CONDITIONS. FOR EXAMPLE, THE "HIGH" PROJECTION OF TEACHER SUPPLY IS BASED UPON THE ASSUMPTION THAT 30 PER CENT OF COLLEGE ENROLLMENT ENTERS TEACHER EDUCATION (AS WAS APPROXIMATELY THE CASE IN 1972). THE FACT THAT STUDENT DECISIONS TO ENTER TEACHER EDUCATION WOULD DROP SEVERELY THE FACE OF POOR EMPLOYMENT PROSPECTS WAS NOT INCLUDED IN THE NCES PROJECTION MODEL.

CHART 4. SUPPLY OF BEGINNING TEACHERS BY AREA OF SPECIALIZATION



THE MAJOR CONTRACTION IN NEW TEACHER SUPPLY HAS TAKEN PLACE IN ELEMENTARY AND SECONDARY EDUCATION.

have contracted over the past five years, while specialty areas such as occupational/vocational, special education, and school service have increased, though only slightly.

- Shortages are still perceived to exist in some specialty areas, particularly in special education, occupational and vocational education, bilingual education, and Indian education (Chart 5).

- While opportunities have increased in special education and occupational and vocational education, results from other sources at state* and national** levels indicate that supply exceeds demand in these areas.

D. The Adjustment Mechanisms

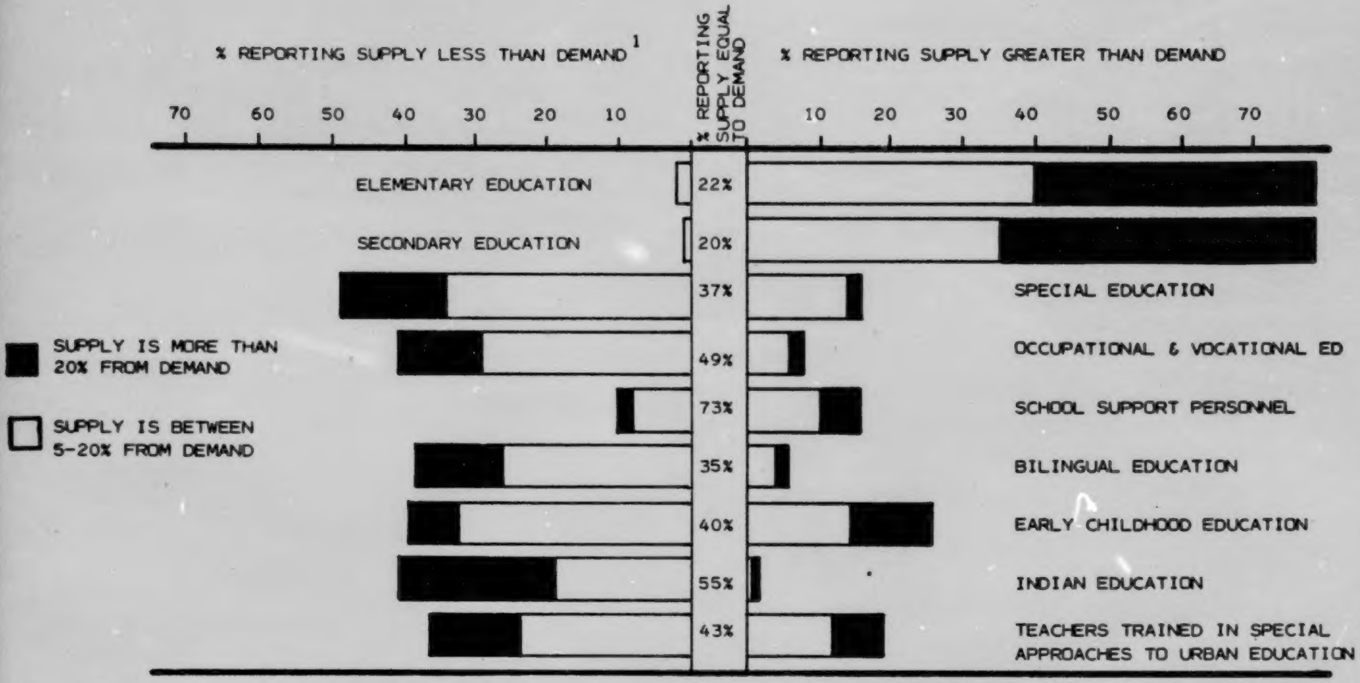
The size of the supply of new teachers results from complex interactions of decentralized, individual and institutional decision-making. Imbalances are inevitable under such a system unless continuing adjustments are made in light of changing circumstances. A close examination of the supply/demand adjustment mechanisms in use suggests that the current mechanism often works on inadequate or imperfect information. It also suggests that substantial planning lead times are required to maintain the supply adjustments in line with demand. The magnitudes of the imbalances of the recent past and continuing cyclic swings of

---

* Gillis, C., "Special Education Manpower in Massachusetts: Status Report and Recommendations", Boston, Massachusetts: Department of Special Education, July 1976; and Stiglmeier, J., "Employment Rate in Field of Certification of Persons Receiving Teaching Certificates by Certification Category: New York State, 1971-1975", New York State Department of Education, 1977.

** Borinsky, Mark, 1976 Survey of Recent College Graduates, National Center for Education Statistics, unpublished data, 1977.

CHART 5. FACULTY PERCEPTIONS OF SUPPLY/DAMAND FOR BEGINNING TEACHERS
AGGREGATE UNITED STATES AY 1975-1976



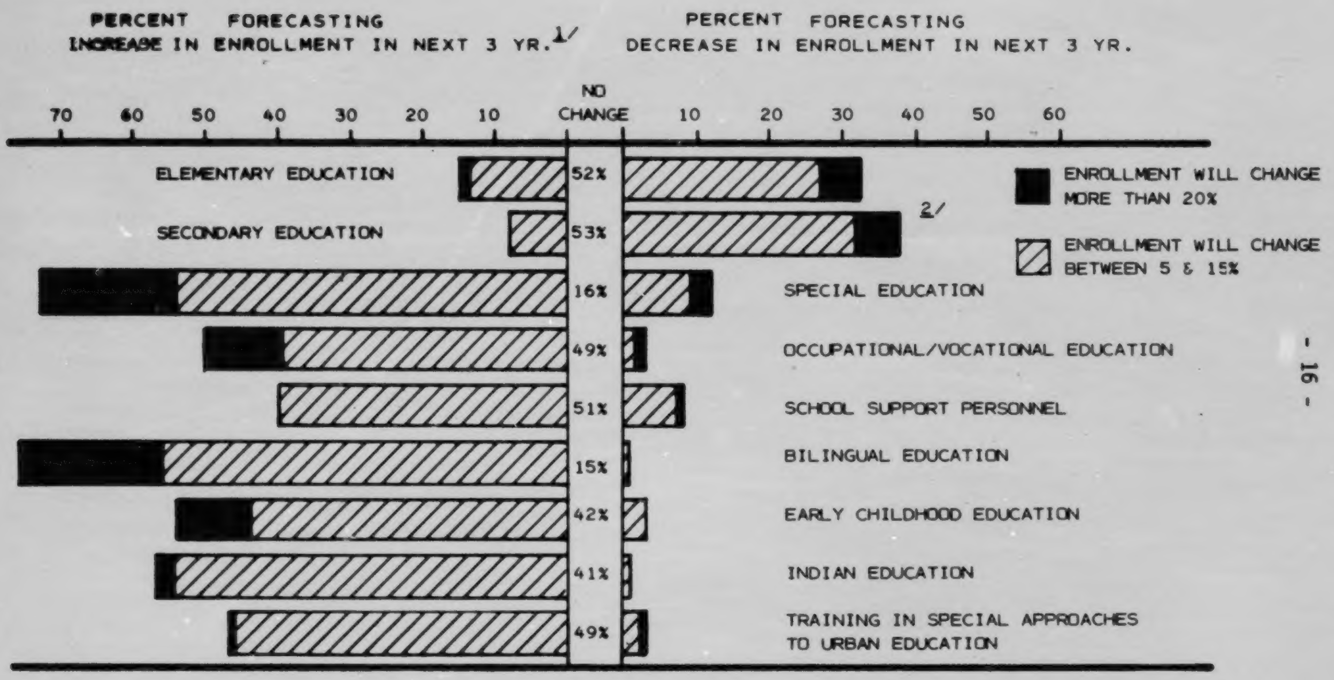
FACULTY WERE ASKED TO ESTIMATE THE LABOR MARKET CONDITIONS FOR A VARIETY OF TEACHING SPECIALTIES. THE RESULTS INDICATE THAT THE TRADITIONAL FIELDS (ELEMENTARY, SECONDARY) ARE EXPERIENCING OVERSUPPLY. ON THE OTHER HAND, FIELDS IDENTIFIED BY THE CONGRESS AS IMPORTANT NATIONAL PRIORITY AREAS (PARTICULARLY SPECIAL ED AND BILINGUAL) HAVE SHORTAGES OF TEACHERS.

---

[1] THE CHART PRESENTS THE PERCENTAGE OF FACULTY IN EACH OF FIVE RESPONSE CATEGORIES

A. SUPPLY MORE THAN 20% LESS THAN DEMAND (BLACK BARS ON LEFT)
B. SUPPLY WITHIN 5-20% OF DEMAND BUT BELOW DEMAND (WHITE BARS ON LEFT)
C. SUPPLY WITHIN + OR - 5% OF DEMAND (CENTER COLUMN)
D. SUPPLY WITHIN 5-20% OF DEMAND BUT ABOVE DEMAND (WHITE GARS ON RIGHT)
E. SUPPLY MORE THAN 20% ABOVE DEMAND (BLACK BARS ON RIGHT)

CHART 6 ANTICIPATED 3-YEAR TRENDS IN SUPPLY OF BEGINNING TEACHERS
AGGREGATE UNITED STATES AY 1975 - 1976



DEANS AND DEPARTMENT CHAIRPERSONS WERE ASKED TO FORECAST TRENDS IN ENROLLMENT DURING THE NEXT THREE YEARS. THEIR RESPONSES INDICATED THAT ENROLLMENT WOULD DECREASE IN TRADITIONAL AREAS SUCH AS, ELEMENTARY AND SECONDARY, AND WOULD INCREASE IN HIGH DEMAND NATIONAL-PRIORITY AREAS SUCH AS, BILINGUAL AND SECONDARY EDUCATION.

1/ INTERPRETATION OF THIS CHART IS SIMILAR TO THAT IN CHART 5: THE CHART DISPLAYS THE PERCENTAGE OF DEANS AND CHAIRPERSONS IN EACH OF FIVE CATEGORIES

2/ 0.6% OR 7 INSTITUTIONS REPORTED THAT THE SECONDARY EDUCATION PROGRAM AT THEIR INSTITUTION WOULD BE ELIMINATED surpluses and shortages will be the price the profession will pay unless it invests in a reliable forward planning capacity. The Congress has recognized this need for such a capability in the Education Amendments of 1976 which require data collection on teacher supply and demand, particularly in national priority areas.

- The classical market mechanism, client/student choice, is the major determinant of the size of the new teacher supply (Chart 7).

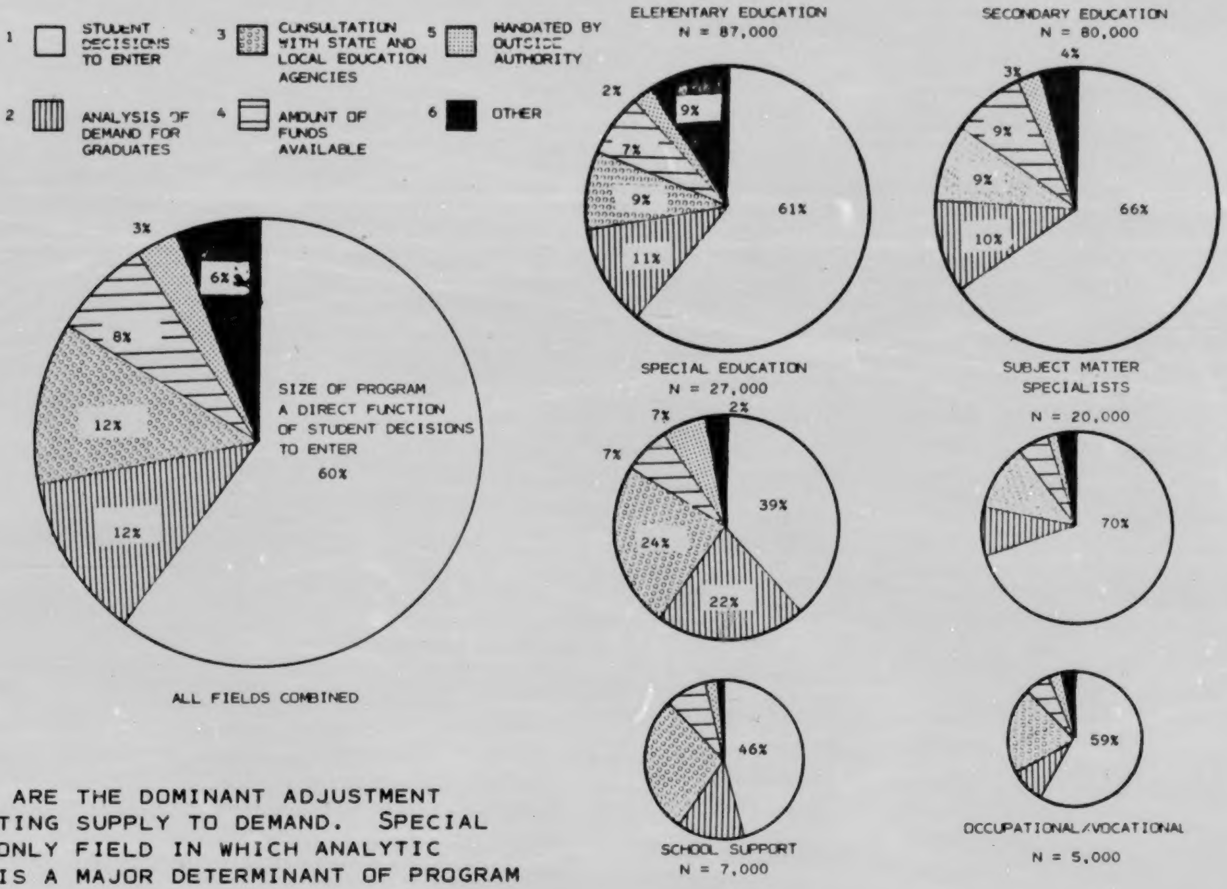
  -- Students' individual decisions to enter or not enter teaching is the primary regulator of enrollments for nearly half the nation's programs, encompassing more than sixty percent of the recent graduates.

  -- Only one-fifth of the programs (training 12% of the teachers) base their enrollment size on an assessment of probable job opportunities, either through consultation with state and local education agencies or through their own analyses of trends.

  -- For the remaining programs, factors that are at best indirect reflections of market opportunities determine enrollment size (i.e., funding limitations, legislative mandates, etc.).

CHART 7. NUMBER OF GRADUATES FROM TEACHER EDUCATION PROGRAMS BY METHOD USED TO DETERMINE PROGRAM SIZE

AGGREGATE UNITED STATES AY 1975-1976



STUDENT DECISIONS ARE THE DOMINANT ADJUSTMENT MECHANISM IN RELATING SUPPLY TO DEMAND. SPECIAL EDUCATION IS THE ONLY FIELD IN WHICH ANALYTIC ADVANCE PLANNING IS A MAJOR DETERMINANT OF PROGRAM SIZE.

SOURCE: NSPPT INSTITUTIONAL PROGRAM DATA

- The strong influence of student choice on enrollment raises the question of whether students are provided adequate data to make informed career choices regarding teaching. Of the 227,000 seniors graduating with teaching certificates:

  -- Only one-quarter of the students (27.5%) received systematic counseling on career opportunities before committing themselves to teaching and, hence, influencing institutions enrollment decisions. (Chart 8)

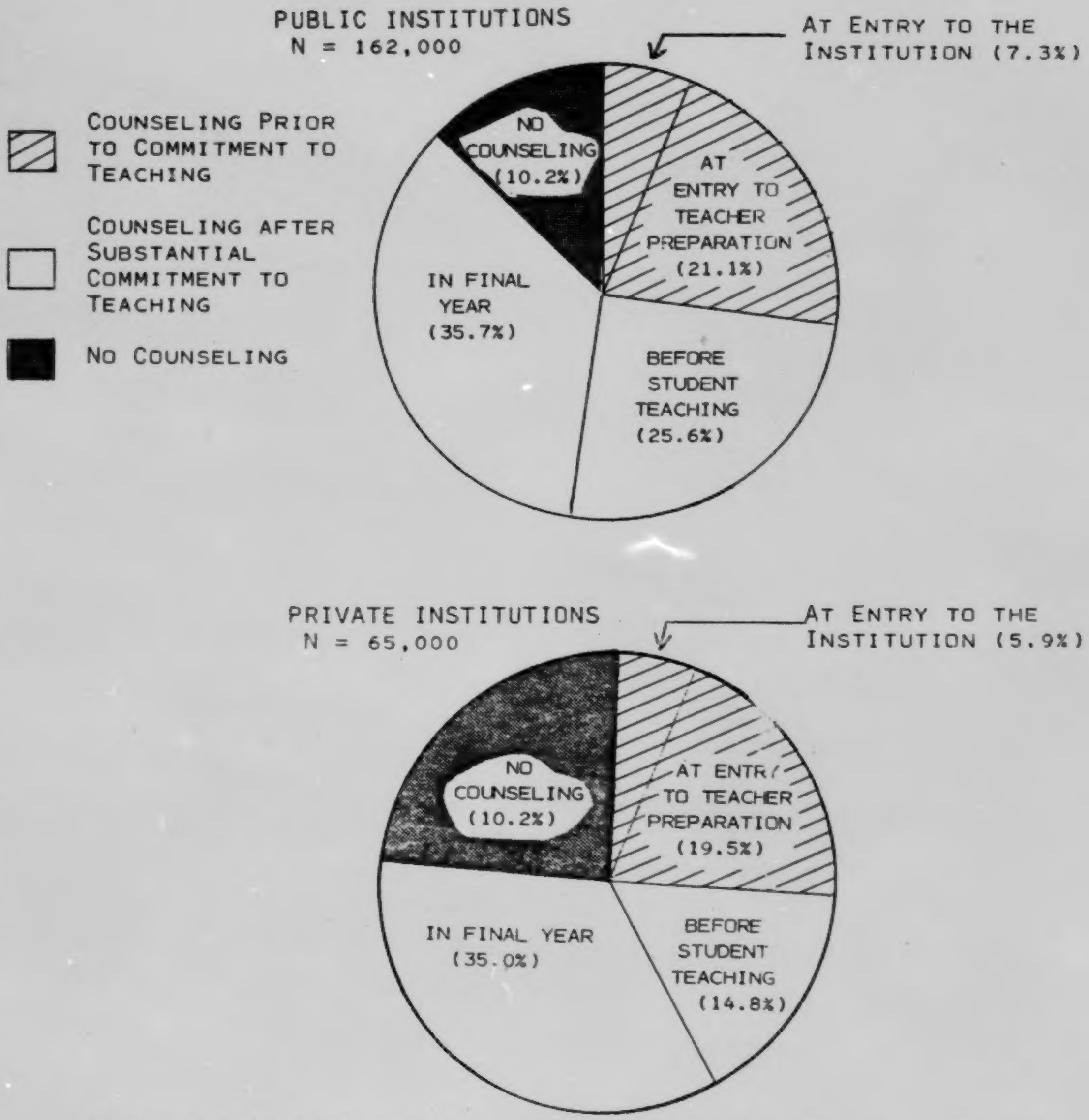
  -- One-half of the students received job counseling only in the final year of their preparation; given the lead time required, this counseling comes too late in all likelihood to enable the student to change from specialties in surplus to those in shortage.

  -- One-seventh of these seniors received no career counseling at all.

  -- A large number of students were unable to judge labor-market conditions. (Chart 9)

- The influence of the education faculty -- who provide the majority of the career counseling -- was found to rank high as a positive influence in students' decisions to enter (or not enter) the teaching profession (Chart 10). Although 31,000 of the nation's 43,000 full-time education faculty are involved in job counseling:

CHART 8. TIMING OF CAREER COUNSELING AS REPORTED BY PERSONS IN THEIR FINAL YEAR OF TEACHER PREPARATION. AGGREGATE UNITED STATES AY 1975 1976



PERSONS FROM PRIVATE INSTITUTIONS WERE MORE THAN TWICE AS LIKELY TO HAVE RECEIVED NO FORM OF CAREER COUNSELING THAN THEIR COUNTERPARTS AT PUBLIC INSTITUTIONS. HOWEVER, ONLY ABOUT ONE FOURTH OF PERSONS FROM EITHER TYPE OF INSTITUTION RECEIVED CAREER COUNSELING PRIOR TO HAVING MADE A SUBSTANTIAL COMMITMENT IN TRAINING.

CHART 9. PERCEPTIONS OF THE LABOR MARKET FOR TRAINED EDUCATION PERSONNEL AS REPORTED BY A NATIONWIDE PROBABILITY SAMPLE OF 3600 PERSONS IN THEIR FINAL YEAR OF TEACHER EDUCATION

AGGREGATE UNITED STATES AY 1975-1976

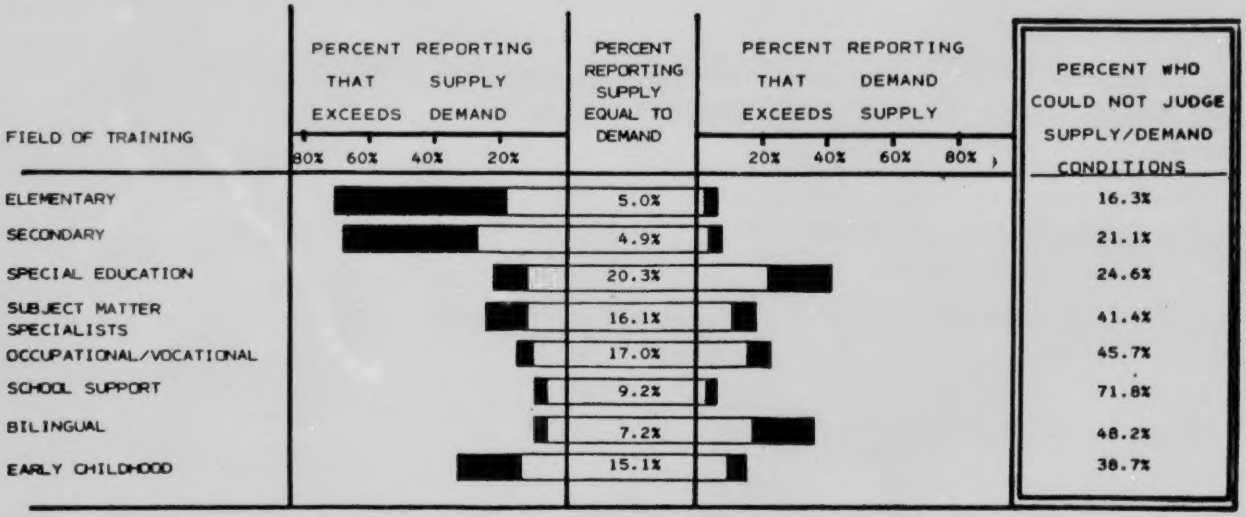
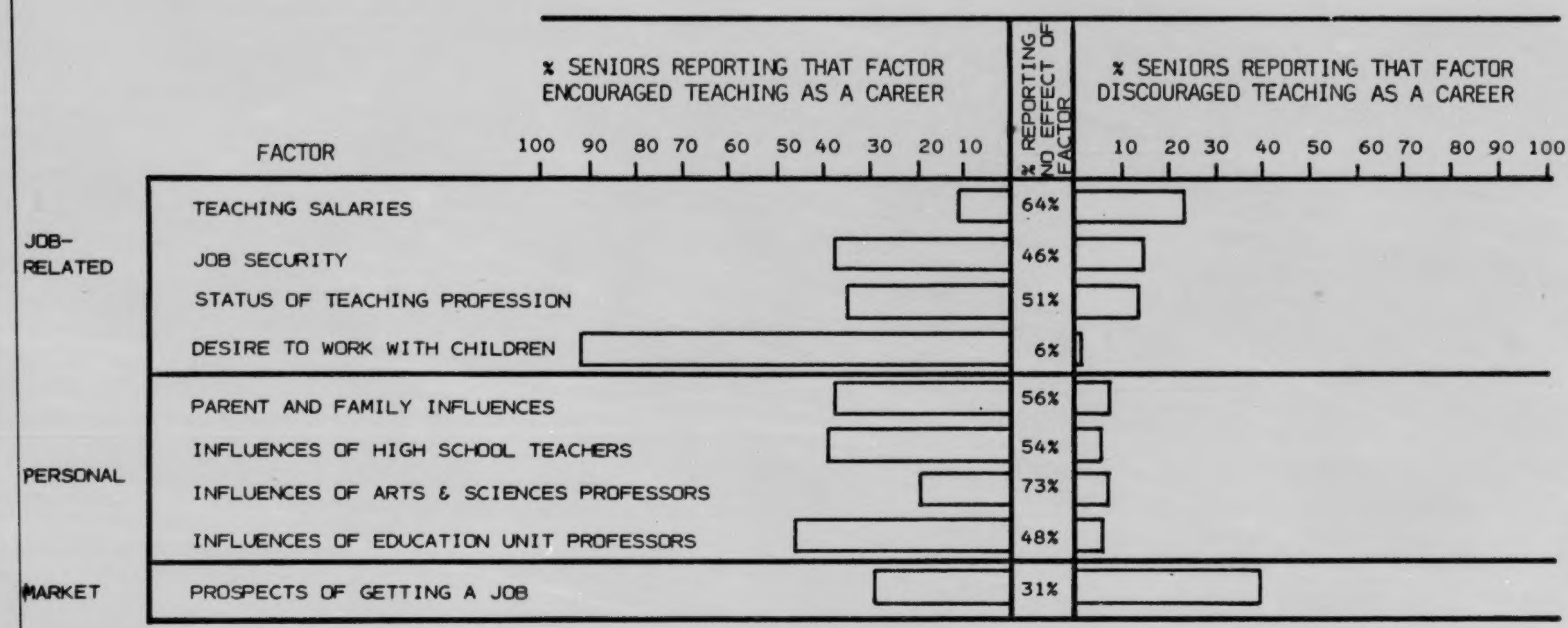


CHART 10. FACTORS AFFECTING STUDENT CHOICE OF CAREERS IN TEACHING
AGGREGATE UNITED STATES AY 1975-1976



SENIORS IN PROGRAMS OF TEACHER PREPARATION WERE ASKED TO REPORT ON THE EFFECTS OF SEVERAL FACTORS ON THEIR DECISION TO ENTER TEACHING AS A CAREER. THE DESIRE TO WORK WITH CHILDREN AND THE INFLUENCES OF EDUCATION FACULTY PROVIDED THE STRONGEST ENCOURAGEMENT WHILE MARKET AND SALARY FACTORS PROVED TO BE THE MOST DISCOURAGING.

  - -- Over 80% reported they had very seldom or never advised students to seek careers outside of teaching.

  - -- Only 54% could recall having advised students to change from teaching specialties in oversupply to those with current demand.

  - -- Almost two-thirds reported that the job market information available to them was not accurate enough to support fully the counseling function. Their perceptions are supported by the inaccuracy of the earlier projections of the size of the surplus, relative to its actual size in 1976-77.

- Beyond the ability of students and their advisors to make informed career decisions, teacher training programs can respond only gradually to change:

  - -- Budgets, generally established outside teacher training programs, adjust incrementally from the base of prior years' budgets.

  - -- Forty-six percent of the education faculty hold tenured positions and have established specialties that may or may not correspond to emerging needs.

  - -- Nearly 40% of the institutions report that two years or longer are required to plan a new program of teacher training, to which time must be added for staffing, budgeting, and initiation.

-- Students require two to four years to complete their programs of training. Commitments to students in existing programs must be honored, even if serious surpluses are anticipated. Conversely, the earliest the graduate of new programs for shortage areas can enter the market is two years after the initiation of a new program.

E. Summary and Conclusions

Although the market imbalances for trained education personnel are still massive, current trends suggest movement toward equilibrium conditions.

Surpluses have dropped almost in half between 1973 and 1976. Individual student decisions may cut the number of persons frustrated in seeking work in teaching to approximately 75,000 in AY 1975-1976. Moreover, institutions appear to be now contracting their programs in surplus areas such as general elementary and secondary education and expanding their offerings in high-demand, national priority areas, such as special education and bilingual-multi-cultural education.

The mechanisms by which these adjustments have been made show a strong influence of individual student decisions. Relative to future job opportunities, the information reaching these students, at least in terms of their formal career counseling, would appear to be neither timely nor accurate enough to support fully informed decisions. Institutions, in turn, can respond only gradually to market changes, whether signaled by changing student preferences or by directly monitoring market conditions. The existing adjustment mechanisms provide little confidence that continuing cycles of massive imbalances are not again to be expected. If the personal frustrations and institutional inefficiencies associated with massive cycles of imbalance and over-adjustment are to be avoided, improvements in both individual and institutional decision processes appear indicated.

- Earlier, more accurate, and more market-oriented career counseling of undergraduates -- perhaps even prior to matriculation -- would strengthen the information base on which students decide their career and program commitments. This would require substantially better data bases, predictive models, and information channels than are available currently.

- A more detailed data base and a commitment to anticipatory rather than reactive program planning would enable institutions to adjust their offerings to supply new teachers to the markets that will exist when they graduate. Given the requisite four to six years to make desirable program adjustments, these market opportunities must be anticipated if counter-cyclical adjustments are to be made.

- Federal and state agencies or professional organizations could well take the lead in providing the improved information needed by individuals and institutions. With little intervention in the current decision processes, a major contribution could be made toward dampening cyclical dislocations.

II. FISCAL ISSUES IN TEACHER PREPARATION

A. Introduction

The findings of the National Survey of the Preservice Preparation of Teachers that pertain to fiscal issues can be summarized quite simply: Teacher education is a buyer's market in which the "customers" -- students and their families -- are highly cost-conscious comparison shoppers. The majority are fully prepared to select the least-cost "seller" -- the institutions of higher education -- that offers the instructional programs they seek. The major item of expenditure over which any substantial discretion is available is tuition. Increasingly large numbers of students in teacher preparation are selecting low-tuition public institutions over private liberal arts and comprehensive colleges. Private universities, as a group, appear less affected by this trend. The existing structure and programs in student financial assistance do not appear to mitigate effects.

The shifts in enrollments, and consequently in revenues, are related to increasing symptoms of fiscal distress that could signal the end of teacher preparation as a specialty offered by many private colleges.

This section briefly examines findings* of the NSPPT as they pertain to:

---

* More detailed discussion of these findings can be found in the companion volume, Fiscal Issues in Teacher Preparation -- 1977.

- The magnitude and direction of shifts in the number of graduates with teaching certificates.
- The reasons that appear to lie behind these shifts.
- The impact of these shifts on the institutions that provide teacher preparation.

B. Shifts in the Distribution of Graduates Prepared to Teach

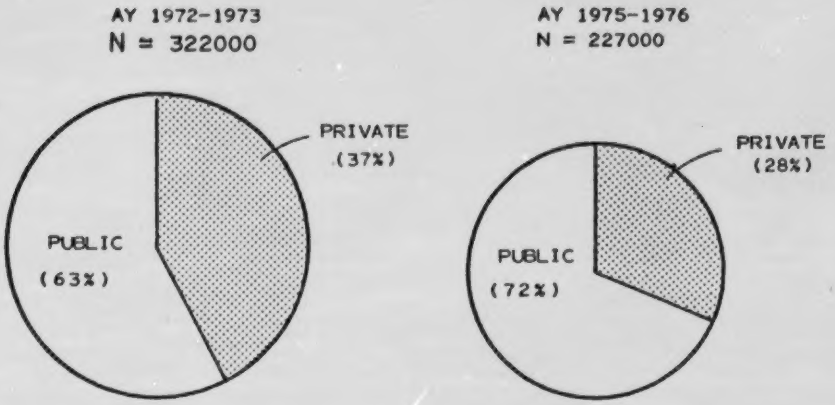
Trends in the distribution of graduates with teaching certificates* shows a marked shift away from private liberal arts and comprehensive colleges toward private universities and public institutions. In only three years between 1972-73 and 1975-76 (Charts 11 and 12):

- Overall trends have been downward, decreasing almost 30%. The greatest relative decreases in the number of graduates, however, have been among private institutions that have experienced a decline of 25% in the number of education graduates during the three years, compared with about 17% for public institutions.
- The resulting proportions of new teachers graduated from public institutions has increased from 63% in 1972-73 to 72% in 1975-76, with corresponding reduction in the share graduated by private institutions.

---

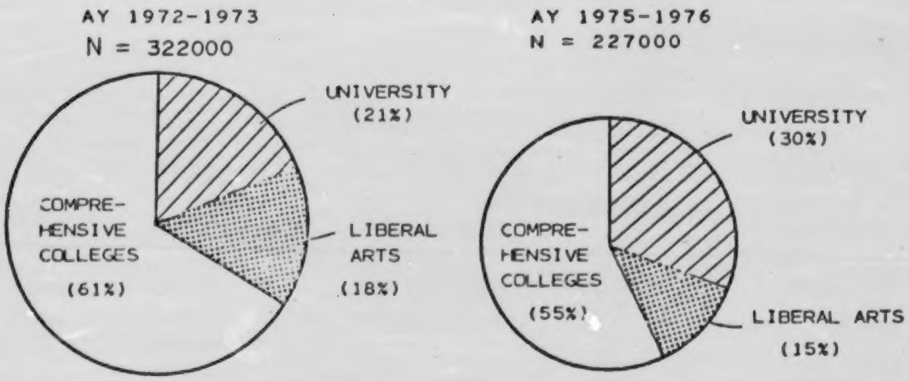
* The distribution of graduates is preferred to the distribution of enrollments for examining aggregate student choice of institutions for two principal reasons. First, the point at which an undergraduate declares a major (e.g., becomes enrolled in a teacher preparation program) varies widely across institutions. Second, many students preparing to teach secondary level subjects formally major in those subjects, taking the required education courses as electives. Graduates with teaching certificates represents a more representative figure.

CHART 11. DISTRIBUTION OF GRADUATES WITH TEACHING CERTIFICATES BY CONTROL OF INSTITUTION AGGREGATE UNITED STATES



SINCE 1972-1973, PRIVATE INSTITUTIONS HAVE COME TO PRODUCE A SMALLER SHARE OF A DECREASING NUMBER OF TEACHERS.

CHART 12. DISTRIBUTION OF GRADUATES WITH TEACHING CERTIFICATES BY TYPE OF INSTITUTION. AGGREGATE UNITED STATES



SINCE 1972-1973, UNIVERSITIES HAVE INCREASED THEIR SHARE OF THE PRODUCTION OF NEW TEACHERS.

- By type of institution, only universities have increased the numbers of their graduates -- up 6%, increasing their share from 21% to 30% of all teacher graduates. The number of teacher graduates from comprehensive colleges has dropped 35% and from liberal arts colleges, 39%.

Such overall shifts tend to conceal concentrations of the impact:*

- Private comprehensive colleges and liberal arts institutions have seen their numbers of teacher graduates shrink by more than half.

- Among the private institutions, only private universities show growth during the period 1972-73 to 1975-76, but again, the base is quite small.

- Public comprehensive colleges have experienced substantial growth (although the base in 1972-73 was quite small).

- Public universities graduated approximately the same numbers of graduates in 1975-76 than they did in 1972-73.

---

* See Fiscal Issues, Section I.C.

C. Apparent Reasons for Shifting Enrollments

Section I pointed out that the major determinant of the size of enrollments, and hence the number of graduates, is student choice. Enrollments have declined and the distributions have shifted because fewer students have selected the field of education and greater portions of those have selected public institutions. The changing distribution of graduates cannot be attributed in any substantial way to limitations on the size of teacher preparation programs imposed unilaterally by the institutions.* Thus, the predominant reasons for the shifts in enrollments are to be found among the factors that influence students' choice of institutions (Chart 13):

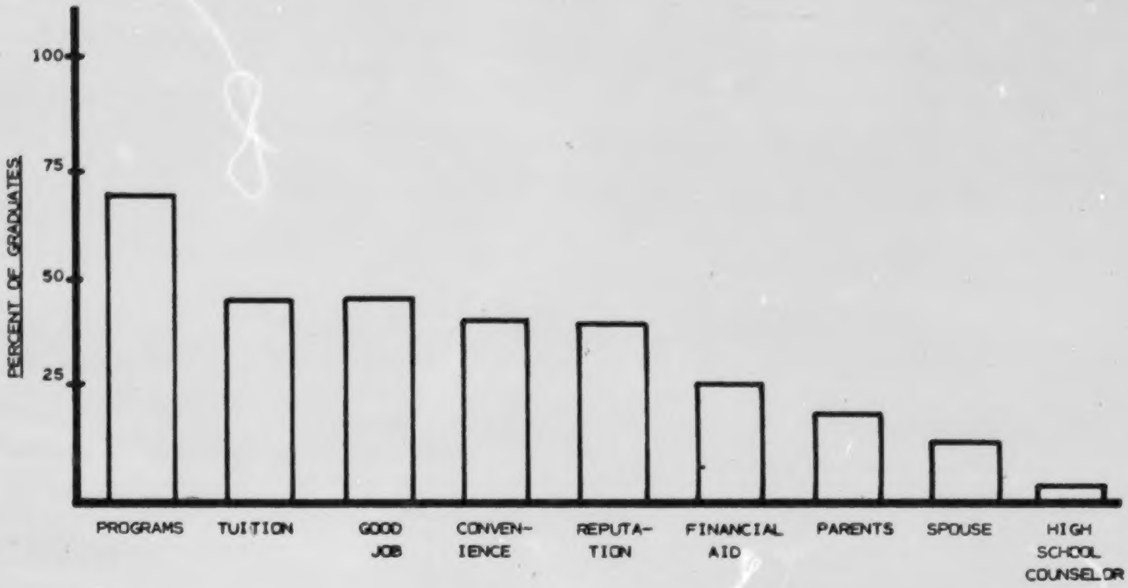
- The most important factor in students' choice of institution was the availability of the desired program.
- The second most important issue in choice of institution was tuition cost.
- However, the availability of financial aids -- which might partially offset differences in tuition -- rated much lower -- sixth out of the nine response categories.

The influence of program availability may account for the growth of private universities' education enrollments, in that this category of institutions has aggressively added new offerings in high-demand

---

* At least one state agency has imposed such limitations.

CHART 13. FACTORS INFLUENCING THE DECISION OF TEACHER GRADUATES TO ATTEND CURRENT INSTITUTION PERCENTAGE OF PERSONS IN THEIR FINAL YEAR OF TEACHER PREPARATION REPORTING THAT EACH OF THE FACTORS WAS "VERY IMPORTANT"



TUITION COSTS ARE THE SECOND STRONGEST INFLUENCE ON STUDENT'S CHOICE OF INSTITUTIONS. THE AVAILABILITY OF FINANCIAL AID FALLS, HOWEVER, WELL BELOW SEVERAL OTHER FACTORS AS AN INFLUENCE ON CHOICE OF INSTITUTION.

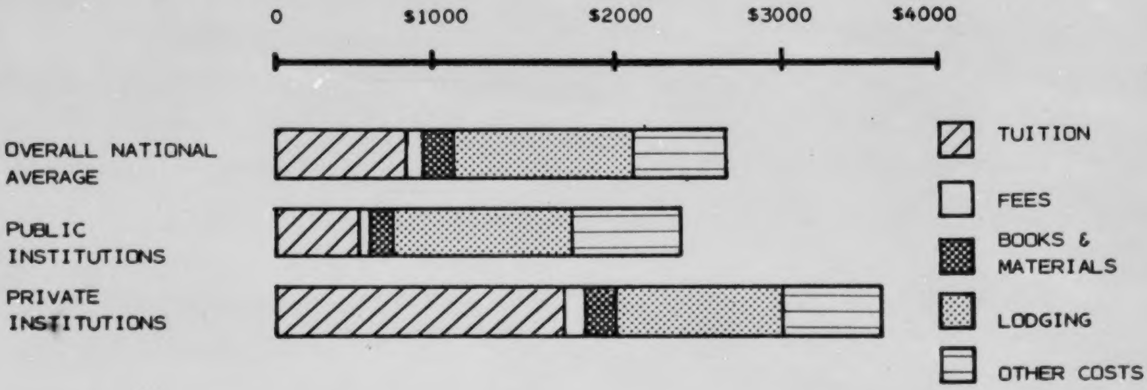
fields. On the other hand, all the institutions in the sample offer specialties in education, and most offer at least some programs in high demand areas. The influence of tuition, however, may account for the dramatic shift from private liberal arts and comprehensive colleges toward public institutions. This suggests closer examination of overall costs to the student and tuition as an element of these costs.

- The total cost to the student of a year's study approached $2900, on the average, ranging from an average of $2600 at public institutions up to an average of $3700 at private colleges and universities (Chart 14). The variation in total expenditure between public and private institutions is almost exclusively attributable to differences in tuition. This item is more than three and one-half times larger at private institutions. Other cost items are roughly comparable.

- Overall, the largest single item of expense is lodging and board (38%), followed by tuition (29%), and the combined costs of clothing, transportation, insurance, and other miscellaneous items (26%). (Chart 15)

- In private institutions, however, tuition and fees represent over half of the student's total outlay.

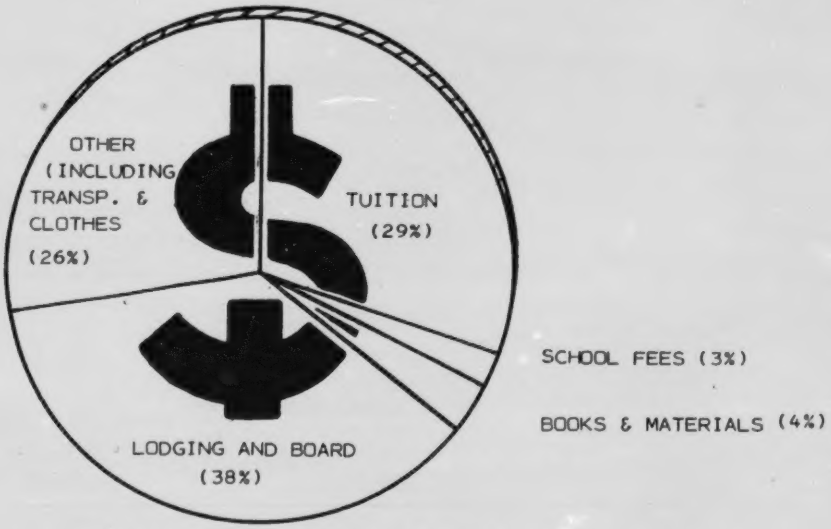
CHART 14. COMPARATIVE COSTS OF TEACHER PREPARATION
(1975-76)



THE COST-DIFFERENTIAL BETWEEN PUBLIC AND PRIVATE INSTITUTIONS IS ALMOST $1000, DUE PRIMARILY TO TUITION DIFFERENCES.

1975-1976

CHART 15. COSTS OF PREPARING TO BE A TEACHER
(NATIONAL AVERAGES)



LODGING AND BOARD ARE THE LARGEST SINGLE COMPONENT OF THE COST OF PREPARING TO BE A TEACHER AS REPORTED BY SENIORS.

Tuition, then, is a major cost item to all students, and much higher to students in private institutions. The NSPPT inquired further into the effect of tuition on student's choice of institutions:

- Low tuitions represented a major attraction to students who chose to attend public institutions (Chart 16), a majority reporting this factor as "very important".
- Four years after the initial choice of institution, substantial numbers of seniors in private institutions were "very dissatisfied" with the higher tuitions they had paid, possibly suggesting that tuition may play a role in inter-institutional transfers (Chart 17).
- These findings seem to hold uniformly for students from all types of socio-economic backgrounds.*

Thus, tuition costs have a major impact on the choice of institutions and would appear to go far in explaining the shifting enrollments.

It might be argued that financial aids would work to mitigate these effects. This, however, does not appear to be the case.** Financial aids appear to be available to most who need them and the level of satisfaction with their availability and adequacy appears to be high, with little variation by type or control of institution or by

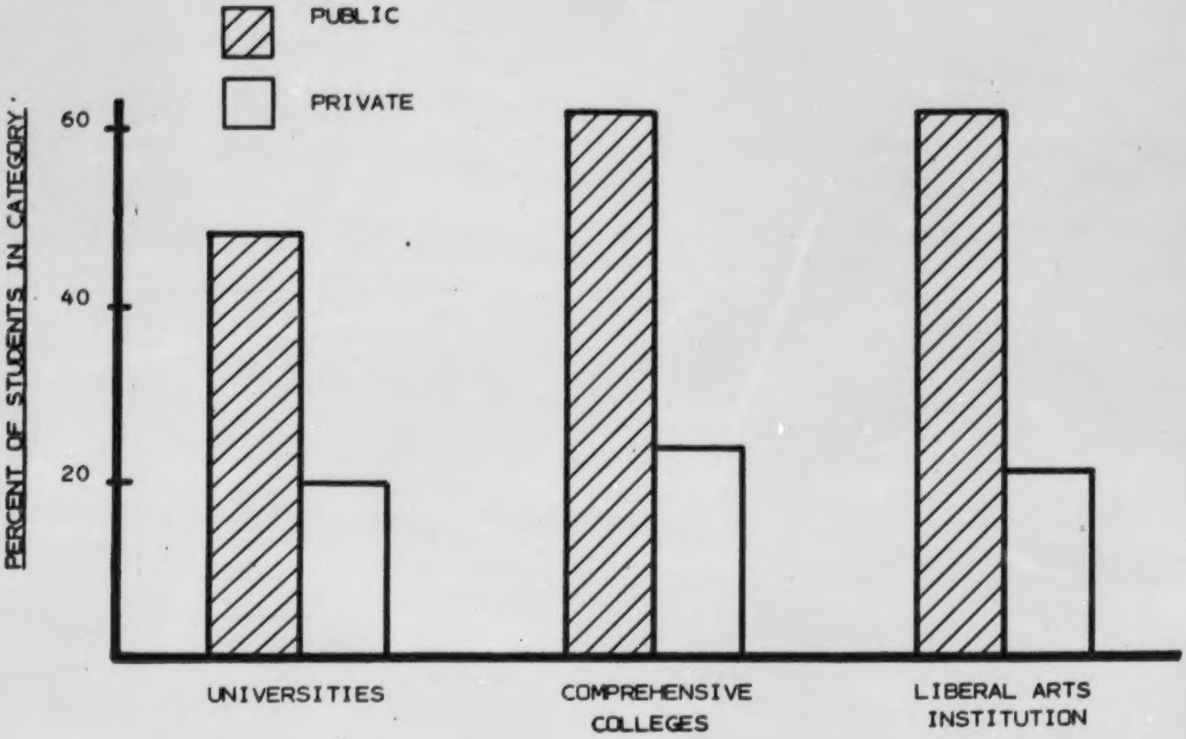
---

* See Financial Issues, Section I.B.

** See Financial Issues, Section I.B., for extended discussion.

CHART 16. PERCENT OF STUDENTS REPORTING TUITION COSTS WERE 'VERY IMPORTANT' INFLUENCE ON CHOICE OF INSTITUTION BY TYPE AND CONTROL OF INSTITUTION.

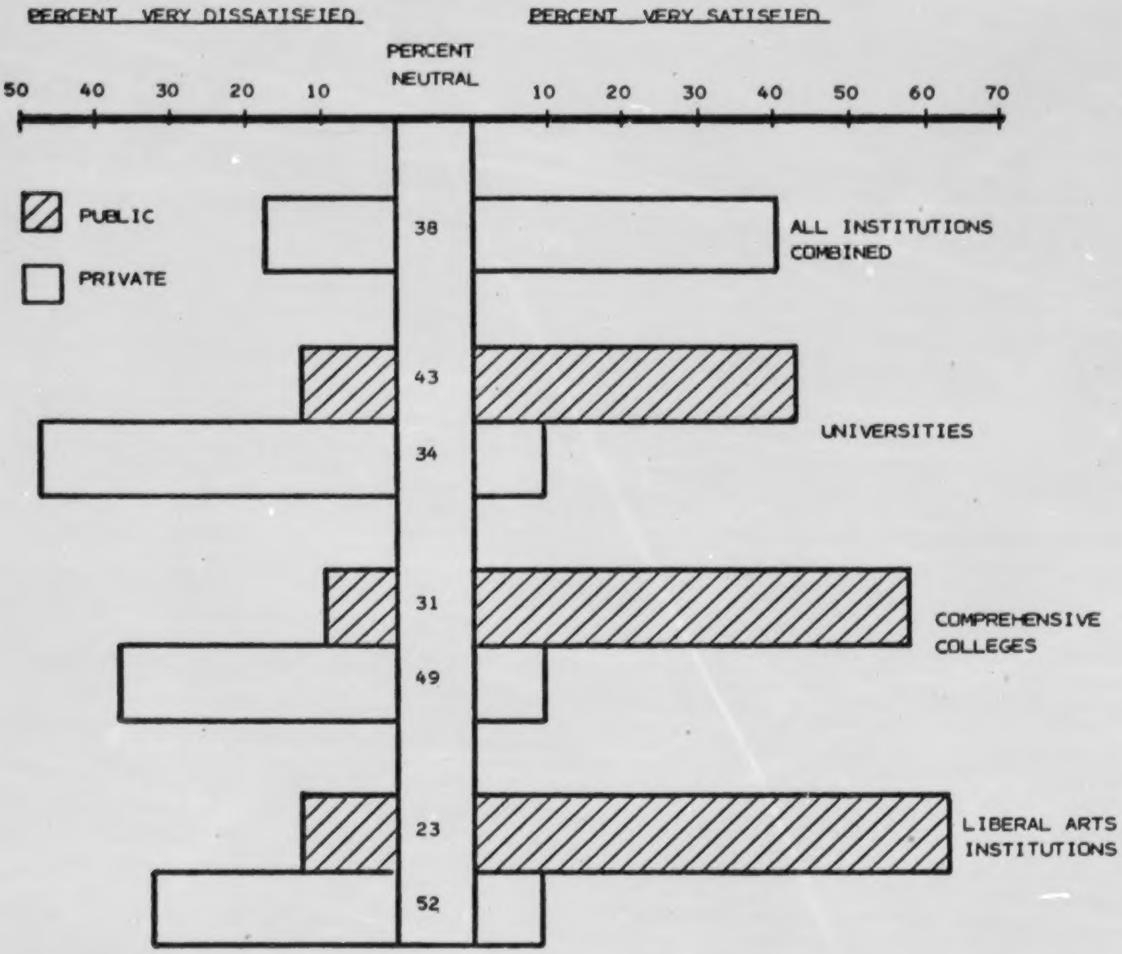
AGGREGATE UNITED STATES AY 1975-1976



LOW TUITIONS WERE A MAJOR ATTRACTION TO PUBLIC INSTITUTIONS FOR STUDENTS IN TEACHER PREPARATION. TUITION WAS A LESS IMPORTANT FACTOR TO THOSE ATTENDING PRIVATE INSTITUTIONS.

CHART 17. Current Satisfaction of Teacher Trainees with Tuition Cost by Type and Control of Institution

AGGREGATE UNITED STATES AY 1975-1976



SUBSTANTIAL NUMBERS OF STUDENTS IN PUBLIC INSTITUTIONS EXPRESS STRONG SATISFACTION WITH TUITION COSTS, WHILE LARGE NUMBERS IN PRIVATE INSTITUTIONS EXPRESS STRONG DISSATISFACTION.

SOURCE: NSPPT STUDENT DATA: SEE TABLE 6

* PERCENTAGES MAY NOT ADD TO 100 BECAUSE STUDENTS REPORTING 'NO OPINION' -- 3.3% OVERALL -- ARE NOT INCLUDED IN THE CHART.

father occupation group. Total aid per recipient is higher for students in private institutions than in public colleges and universities, due to larger loans and scholarships. Grants, which are often quite sizeable relative to total costs, appear to be about the same magnitude in public and private institutions. Despite the greater financial assistance to students in private institutions, the size of personal and family contributions to these students appears to be consistently higher than the comparable contributions to students in public universities and colleges.

Thus, the principal reason for shifting enrollments is student choice. The major determinant in the preference for public over private institutions appears to be tuition costs, with little mitigating effects of financial aids.

D. Impact of Shifting Enrollments

The dramatic shifts away from teacher preparation programs, especially in private liberal arts and comprehensive colleges, have affected these institutions in at least two ways -- closings of education units and institution-wide deficits.

The NSPPT received responses from four of the sampled institutions indicating that they had closed their teacher preparation units. Three additional institutions have also informed NSPPT that they have ceased to prepare teachers. This base is too small to permit statistical extrapolation, but clearly, some institutions are being forced out of training teachers.

The NSPPT asked about incidence of outlays exceeding revenues for the institution as a whole. For private institutions, such incidence represents deficits; for public institutions, they are cost-overruns, usually causing transfers of funds from one year to the next. For either type of institution, they suggest financial distress and signal the need for adjustments. The data were collected for the four years from academic year 1971-72 to 1974-75 (Chart 18):

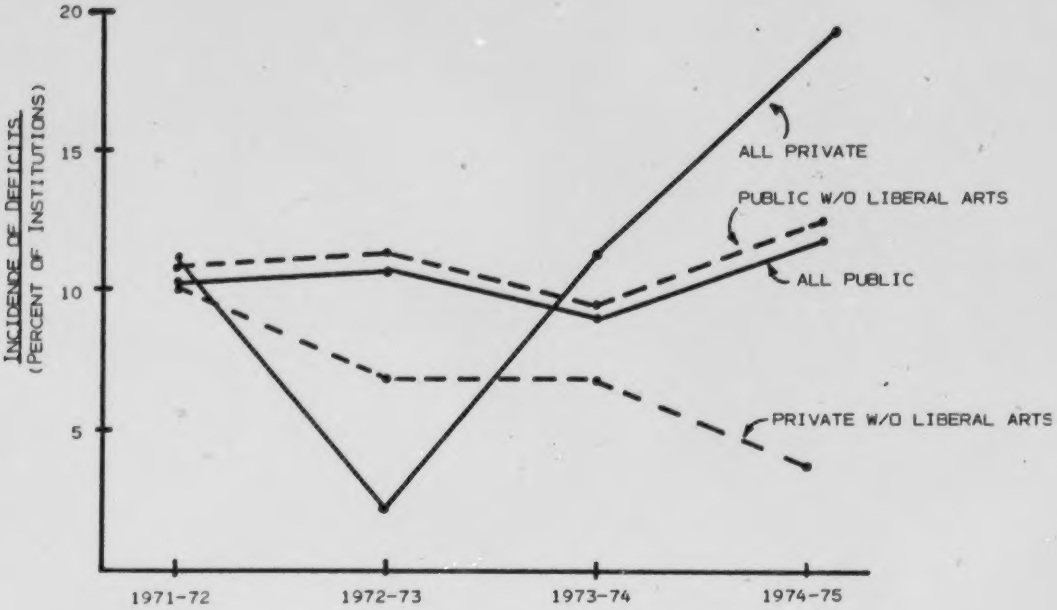
- In 1974-75, over 18% of private institutions reported deficits, against about 12% for public institutions.
- The trend in the proportion of all private institutions showing deficits has been strongly upward for the latest three years reported, while the proportion of public institutions with excess expenses has remained about constant. This trend is primarily attributable to the private liberal arts colleges.

Thus, the incidence of deficits and cost overruns shows them to be higher and increasing for private liberal arts colleges. For all other private teacher training institutions, the incidence of deficits appears to be declining. About a constant 10% of public institutions experience cost overruns. Incidence data, however, do not imply the severity of the shortfall of revenues relative to expenses. The NSPPT asked the size of the deficit in dollars. These were related to the 1974-75 total budget to provide an indicator of the magnitude of the deficits and cost overruns.*

---

* See Financial Issues, Section II.A.

CHART 18. INCIDENCE OF DEFICITS IN PUBLIC & PRIVATE INSTITUTIONS WHICH PREPARE TEACHERS AGGREGATE UNITED STATES AY 1971-1975



OVERALL, PRIVATE INSTITUTIONS HAVE HAD A HIGHER INCIDENCE OF DEFICITS, BUT THESE APPEAR TO BE HIGHLY CONCENTRATED IN LIBERAL ARTS INSTITUTIONS. EXCLUDING LIBERAL ARTS INSTITUTIONS, PUBLIC UNIVERSITIES AND COMPREHENSIVE COLLEGES HAVE HAD A HIGHER INCIDENCE OF DEFICITS.

- Relative deficits in private institutions overall run about twice as high as relative overruns in public institutions.

- The overall deficits and overruns are relatively small. Relative to the 1974-75 budget, the average for public institutions was 1.5%; for private institutions, 3.1%.

- The higher relative deficits in the private institutions are principally contributed by the comprehensive colleges (6.4%) and liberal arts colleges (4.4%). These are the two categories with the largest drop in teacher graduates. The relative deficit at private universities, which experienced a gain in the number of teacher graduates, was only 1.2%, comparable to the public institutions.

It would appear then, that shifts in the number of teacher graduates is associated with financial difficulties, especially among private liberal arts and comprehensive colleges. For these categories, the incidence and magnitude of deficits are higher than for private universities or for public institutions. Except perhaps for these institutions, the relatively small magnitude of the deficits, however, suggests that the institutions that train teachers are coping with their changing situations.

E. Trends in Tuition Revenues

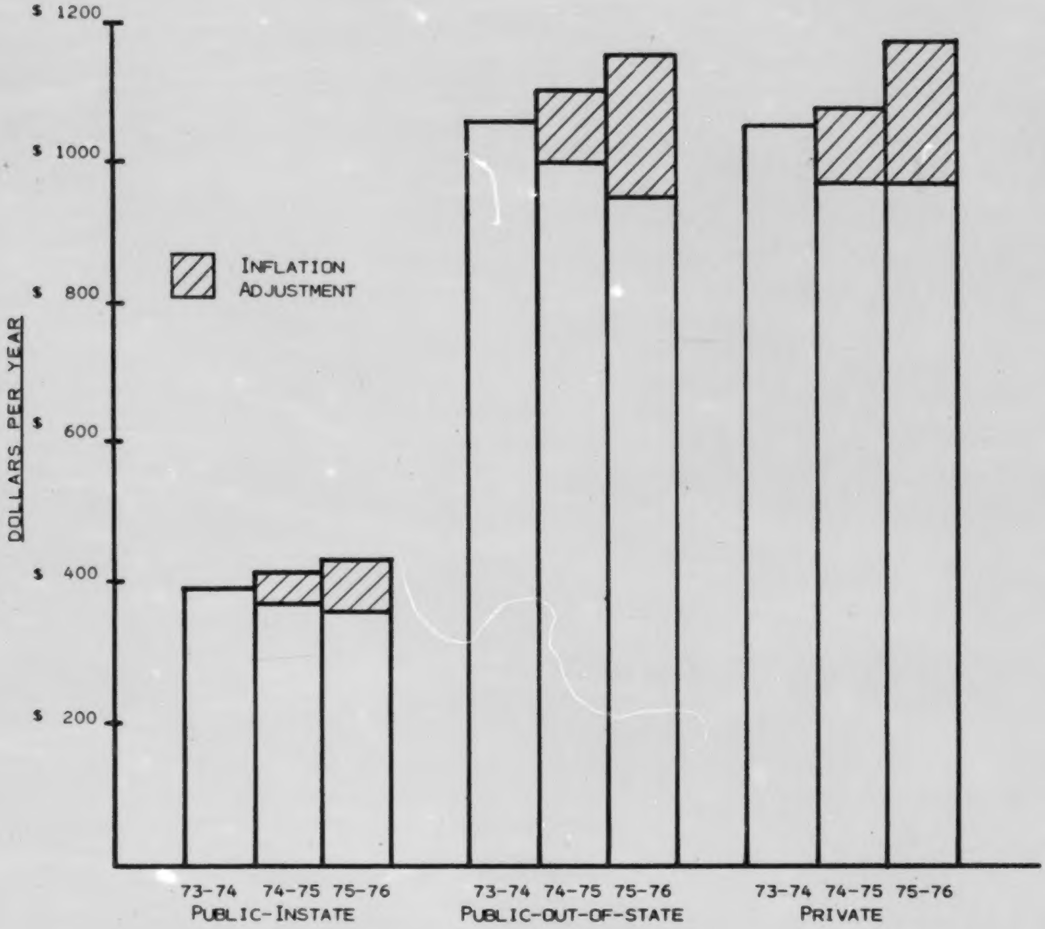
An important source of revenues, even for public universities and colleges, is tuition. The NSPPT asked teacher training institutions to report their tuition changes over the three years, 1973-74 to 1975-76 (Chart 19):

- Tuition changes for both public and private institutions have increased over the three year period.
- When inflation is taken into account, however, tuition income per student has not even remained constant. In all cases, the purchasing power of tuition has decreased despite the increase in nominal dollars.

The decrease in purchasing power of tuition, coupled with the students' shifting from private colleges to private universities and public institutions of all types, helps to explain the incidence and magnitudes of the deficits noted above. Fewer students, each contributing less purchasing power, result in less real income.

Education units are rarely aware in any detail of the ultimate sources of their revenues. Most operate as cost centers against a fixed budget, set externally to the education unit. Thus, the NSPPT cannot describe trends in other forms of income. From the relatively small incidence and magnitudes of deficits and cost overruns, however, one might surmize that cost-reductions and revenues other than tuition (endowments, alumni gifts, public appropriations, institutional aid programs, etc.) have been the mechanisms used for coping with fiscal challenges.

CHART 19. MEAN TUITION CHARGES, ACADEMIC YEARS
1973-74 THROUGH 1975-76
AGGREGATE UNITED STATES



ALTHOUGH TUITIONS HAVE RISEN, THE INCREASE IN INCOME HAS BEEN LOST TO INFLATION -- TUITION INCOME PROVIDES LESS PURCHASING POWER IN 1975-76 THAN IN 1973-74 FOR ALL CATEGORIES OF INSTITUTION.

SOURCE: NSPPT INSTITUTIONAL DATA, SEE TABLE 24

F. The Near Future

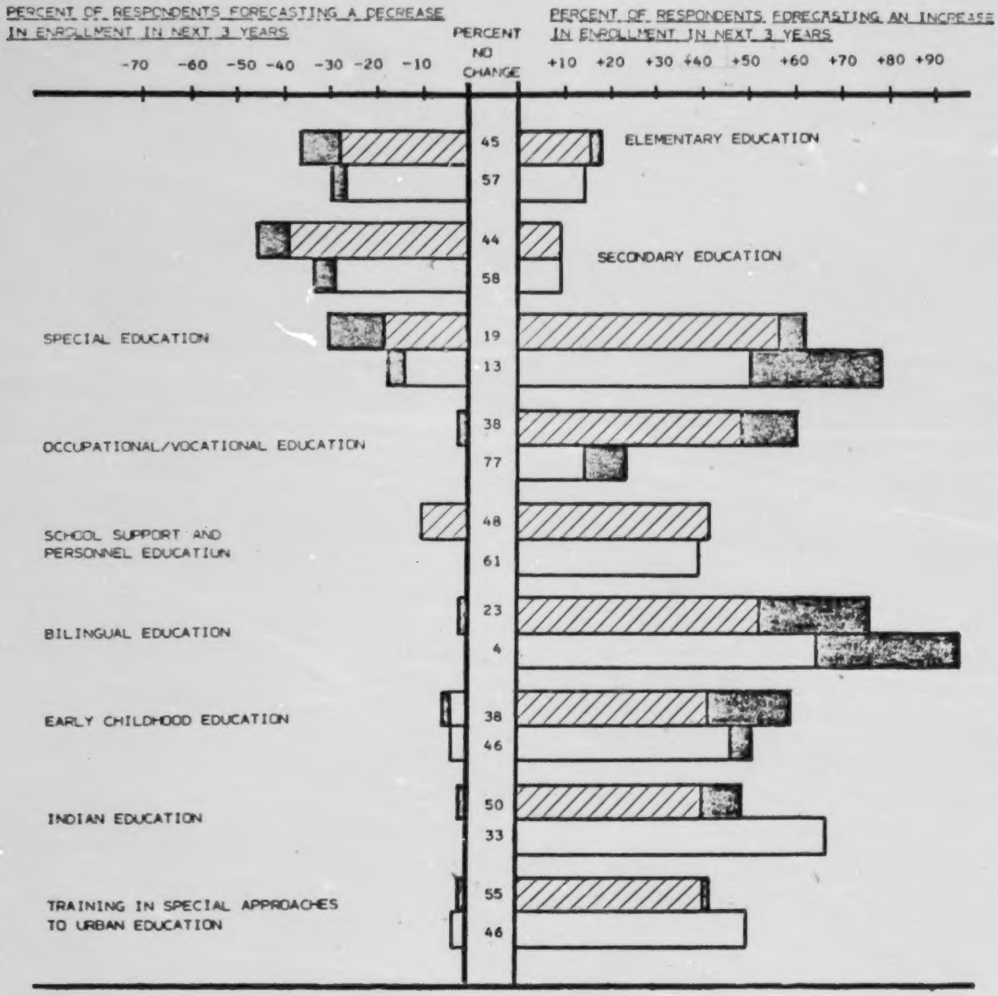
Looking toward the near future, the prospects for teacher preparation institutions do not improve appreciably. The NSPPT asked deans and department chairmen in education programs for their anticipation of changes in enrollments over the next three years. Their overall predictions are shown in Chart 20:

- General elementary and secondary education -- the two areas that have historically produced the vast majority of trained teachers and where the surplus has been greatest -- are expected to show the greatest decreases in enrollments. Because these programs are by far the largest, this prediction argues that the overall total enrollments will continue to fall.

- Other teaching specialties -- where there has been no surplus -- are anticipated to grow in enrollments. These specialty areas include areas of national priority, such as special occupational/vocational, bilingual education, and other areas where training is tailored to working with specific groups with distinctive needs. The large anticipated increases, however, do not argue for increases in total enrollments because the base for these percentages (both enrollments and the numbers of programs) is quite small relative to the bases for elementary and secondary education.

The anticipated continuing decline in overall enrollments and the greater specialization in offerings have three fiscal implications. First, the resources to education units that are contingent on enrollments

CHART 20. ANALYSIS OF ANTICIPATED ENROLLMENT IN TEACHER EDUCATION PROGRAMS BY CONTROL OF INSTITUTION



THE LARGEST PROGRAMS -- ELEMENTARY AND SECONDARY -- ARE EXPECTED TO DECLINE OVER THE NEXT THREE YEARS, BUT MOST OTHER SPECIALTIES ARE EXPECTED TO HAVE INCREASED ENROLLMENTS.

LEGEND:

	CHANGE 5-20%	CHANGE > 20%
PUBLIC	▨	■
PRIVATE	☐	■

(tuitions, some appropriations, some element of institutional budgetary allocations) will continue to decline. Second, the specialized offerings, except for special education, tend to be most costly per student.* Third, shrinking enrollments may cause heavier reliance on tenured faculties, as overall staffing is reduced. Thus, the anticipated enrollment trends suggest lower total revenues and higher unit costs to educational units. Whether these will result in higher deficits and cost overruns depends on how the institutions program and manage their resources.

G. Summary

In summary, the apparent prominence of tuition in students' decisions on the type of institution they will attend has led to sharply reduced numbers of graduates and enrollments in private comprehensive and liberal arts colleges. For these two types of institutions, more frequent and larger relative deficits have been noted. The anticipated trends suggest continuing shrinkage of tuition-paying enrollments and increasing per-student costs, due to both more costly program offerings and proportionally heavier reliance on tenured, senior faculty as staff reductions are concentrated among junior faculty. Thus, for these institutions, considerable fiscal difficulty is predictable.

Private universities have faired better than private institutions as a whole. Their prestige, more diverse program offerings, larger resources, and smaller proportional emphasis on undergraduate training have helped buffer them from the difficulties encountered by private colleges.

---

* See Financial Issues, Section II.C.

Public institutions have been the beneficiaries of students' attitudes toward tuition costs. Although enrollments have declined, the rate has been less precipitous than in the private institutions. Funding through appropriations, frequently on an incremental basis, has helped contain fiscal difficulties. The rate of cost overruns appears to reflect a rather stable year-to-year adjustment mechanism rather than fiscal distress. This is not to argue that adjustments for these institutions will be unnecessary. Rather, the required adjustments will be orderly and gradual. Some public institutions, especially those that have historically concentrated on the undergraduate preparation of teachers, will undoubtedly experience dislocations similar to their private sector counterparts.

Overall, then, nearly all institutions engaged in the preservice preparation of teachers have experienced and will continue to face fiscal challenges associated with reductions in enrollments. Private universities and public institutions appear to have the strongest fiscal and enrollment base that will enable them to adjust to these new conditions. Private colleges have faced and are likely to continue to face the more severe challenges.

III. STRIVING TOWARD A PROFESSION

A. Background

The keynote for a recent conference of the American Association of Colleges for Teacher Education was Educating a Profession. This theme was drawn from the report of the Bicentennial Commission on Education for the Profession of Teaching. It called for a transformation in the governance of teacher education as well as changes in the preparation of America's teachers.

While the report acknowledges the dedicated service provided by teachers, it states:

> "All of us have known for decades that teacher education has never been adequate. ...For too long, teachers and teacher education have proclaimed their professional status, knowing that it was more aspiration than reality. ...Not until all teachers have an adequate level of competence, and not until the profession itself and its preparing institutions can demonstration that the ability of teachers is due to the quality of their preparation, can we claim a genuine profession."

The report lists twelve characteristics of a profession as standards by which teaching and teacher education should be judged.*

---

* It was not the purpose of the study to judge the validity of these twelve characteristics. Rather, the intent was to provide factual data on conditions in teacher education, organized around topics of high interest.

Of these criteria, two represent conditions that most observers would agree have historically been met by teaching:

- The profession provides an essential social service.
- The profession is concerned with an identified area of need or function.

Accordingly, these are not discussed in this report.

Four more of the criteria concern the position of the profession *vis-a-vis* society, and are beyond the scope of the current study:

- Operation and training for the profession are controlled by an autonomous professional organization within broad limits of accountability.
- Individual practitioners are held in high public trust and confidence.
- The authority to practice derives from the client or employing organization.
- The profession holds itself accountable -- and practitioners are relatively free from direct on-the-job supervision or direct public evaluation.

The *National Survey of the Preservice Preparation of Teachers* (NSPPT) provides insights into the current status of new teachers and the institutions that prepare them relative to the remaining six criteria set forth by the Bicentennial Commission. In each of these areas, teacher education is making progress toward development as a full profession. This section reviews these six criteria.

B. Protracted Professional Education

> "Preparation for and induction to the profession is provided through a protracted preparation program, usually in a professional school or a college or university campus."

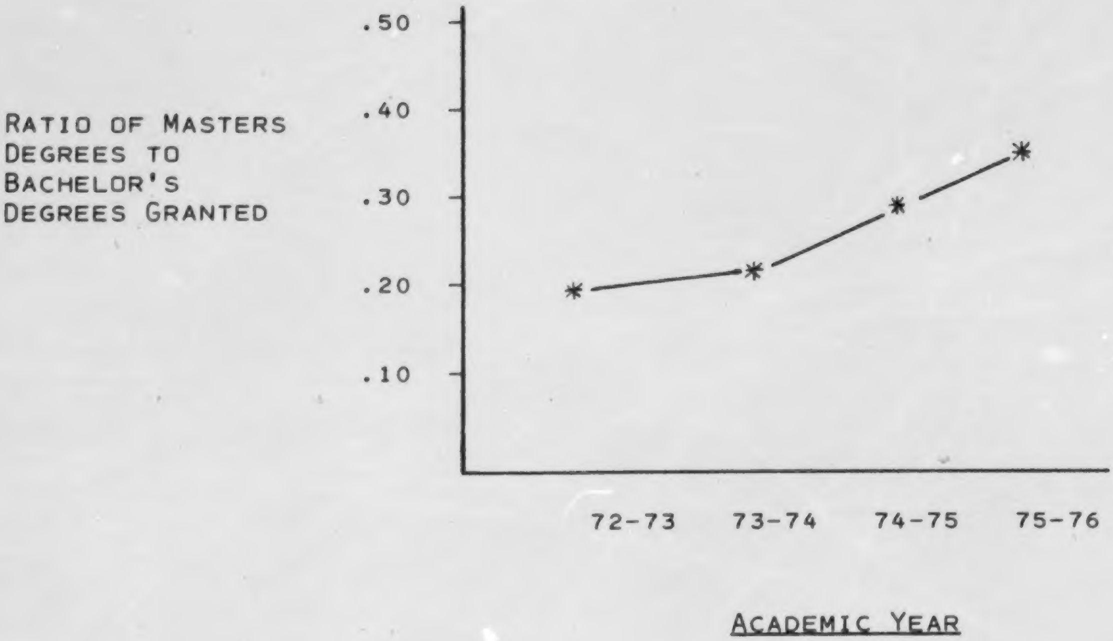
Teacher education has typically required the least "protracted" period of professional training -- the bachelor's degree. Trends in the NSPPT data, however, show a gradual increase in the amount of university training that is brought to the teaching job.

- The ratio of master's degrees to bachelor's degrees granted by the nation's schools, colleges, and departments of education has increased from one-to-five in 1972-73 to almost one-to-two in 1975-76. (Chart 21)

- Of seniors with teaching credentials, 14.3% intend to pursue graduate training in education -- primarily at the master's level with concentration in fields which currently enjoy demand for teachers. Of these, nearly 50% indicate that they believe that success in finding a job in their intended teaching specialty requires an advanced degree. (Chart 22)

CHART 21. RATIO OF MASTERS TO BACHELORS DEGREES GRANTED BY SCHOOLS, COLLEGES, AND DEPARTMENTS OF EDUCATION AY 1972-1973 THROUGH AY 1975-1976

AGGREGATE UNITED STATES

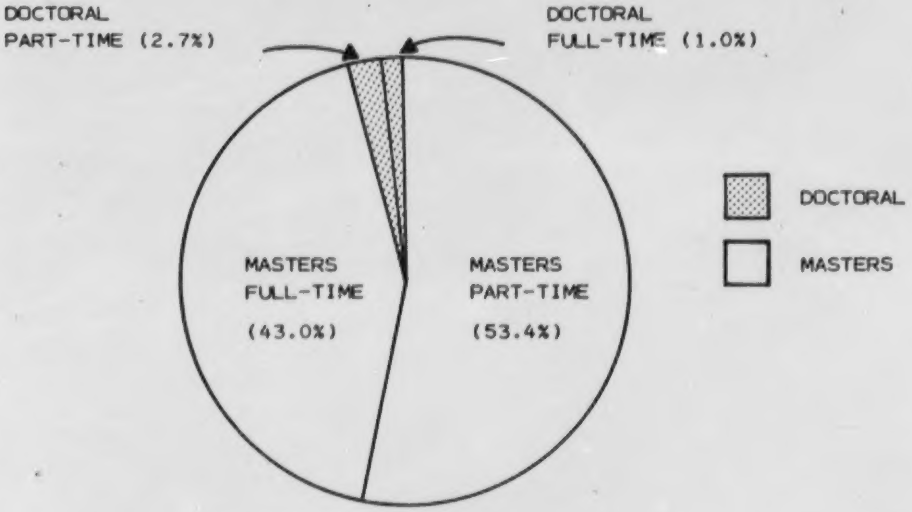


THE RATIO OF MASTERS TO BACHELORS FOR DEGREES GRANTED HAS SHOWN A STEADY INCREASE

CHART 22. INTENDED DEGREE, AREA OF TRAINING, AND PART/ FULL TIME ATTENDANCE STATUS OF PERSONS COMPLETING TEACHER PREPARATION IN AY 1975-1976 WHO PLAN TO PURSUE GRADUATE TRAINING IN EDUCATION

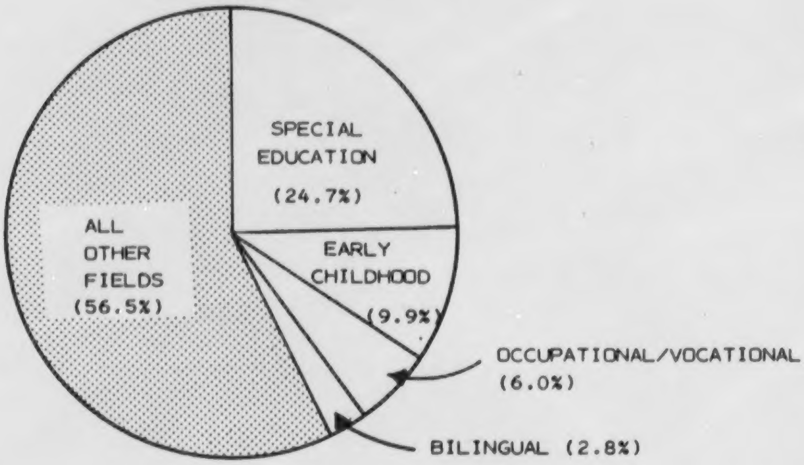
AGGREGATE UNITED STATES AY 1975-1976

N = 31,600



APPROXIMATELY 24.5% OF THE NATION'S 227,000 GRADUATES FROM PRE-SERVICE PROGRAMS INTEND TO PURSUE GRADUATE TRAINING IN EDUCATION - PRIMARILY MASTERS DEGREES ON A PART-TIME BASIS

N = 31,600



SPECIAL EDUCATION COMPRISES 12% OF PRESERVICE TRAINING, BUT 24.7% OF THE GRADUATES PLAN TO PURSUE ADVANCED TRAINING IN SPECIAL EDUCATION. HIGH-DEMAND SPECIALTIES COMPRISE 43.4% OF INTENDED GRADUATE PROGRAMS.

C. Standards for Admission

> "The profession has agreed upon standards for admission and continuation within it."

The National Survey examined the admissions standards employed by teacher training institutions. The results suggest that institutions do employ a formal screening process for applicants to teacher training and that this screening results in the selection of students with higher-than-average entrance scores.

- Teacher training programs use traditional means for admitting persons to training -- college grade-point averages, personal interviews, secondary school grades, and standardized test scores. (Chart 23)

- These procedures tend to admit students to teacher training who score higher than the general college population on standardized college entrance examinations. (Chart 24)

CHART 23. FACTORS IN ADMISSION TO TEACHER PREPARATION AGGREGATE UNITED STATES AY 1975-1976

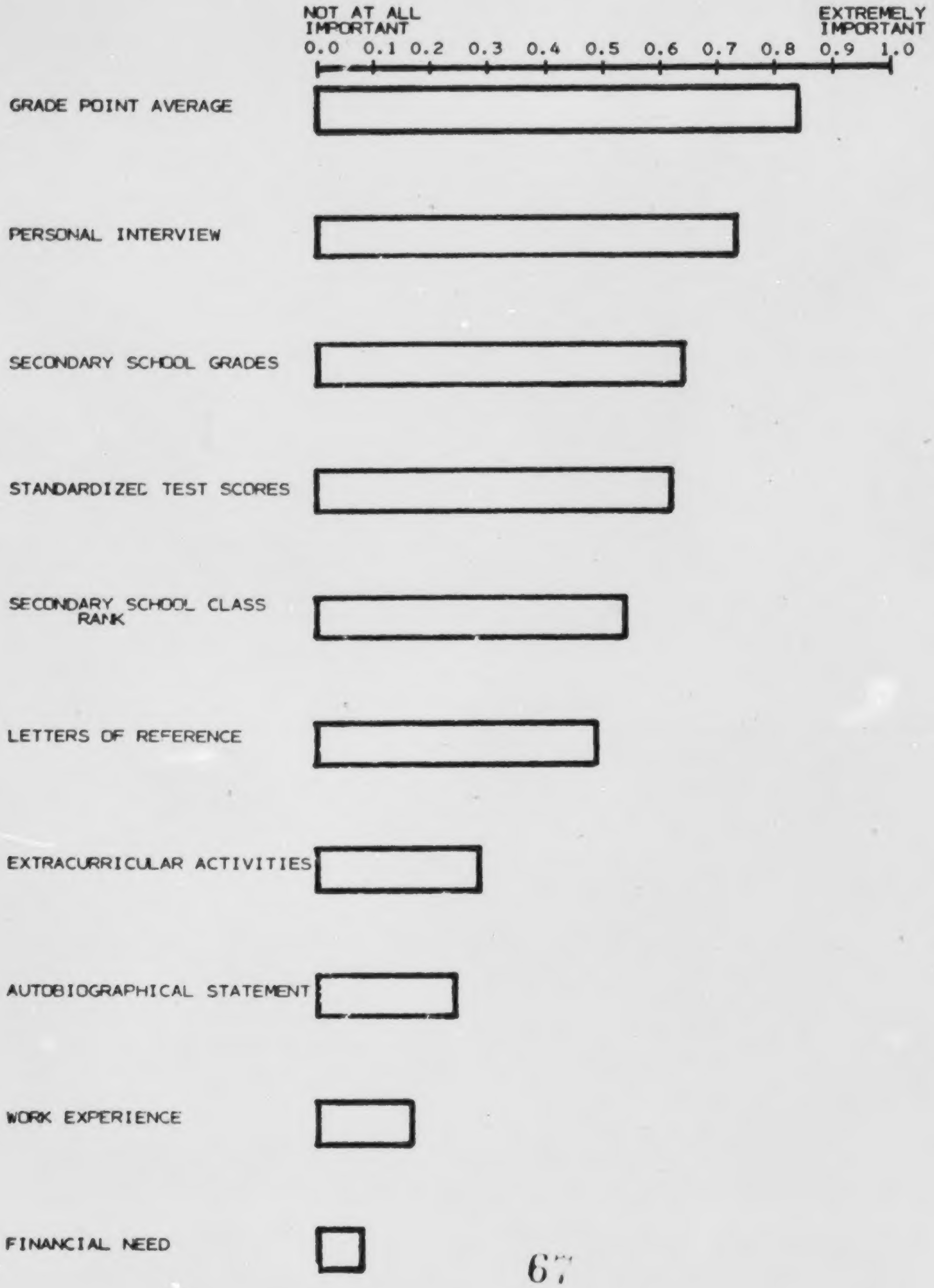
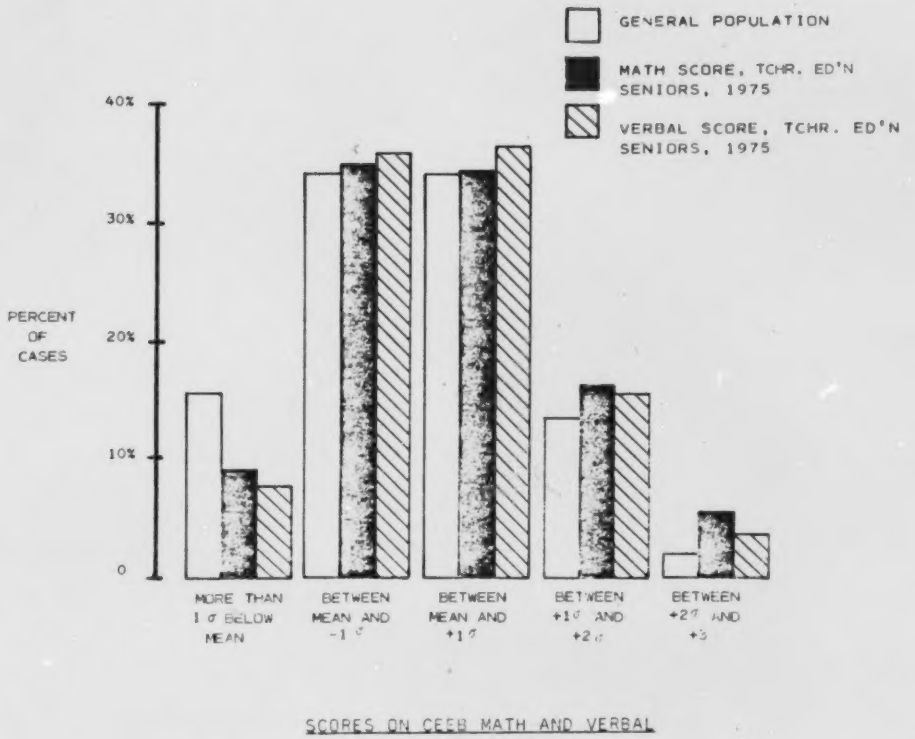


CHART 24. COMPARISON OF TEACHER EDUCATION SENIORS WITH THE GENERAL COLLEGE POPULATION ON THE CEEB MATH AND VERBAL TESTS

AY 1975-1976



RAW SCORES ON THE CEEB ARE TRANSFORMED TO PRODUCE A DISTRIBUTION WHICH IS APPROXIMATELY NORMAL WITH MEAN 500 AND STANDARD DEVIATION 100. C.F. TEST SERVICE BULLETIN NO. 48., THE PSYCHOLOGICAL CORPORATION, 304 EAST 45TH STREET NYC

DATA ARE WEIGHTED NATIONAL ESTIMATES OF THE PERCENTAGE OF STUDENTS IN EACH CATEGORY WHO ALSO INDICATED THAT THEY HAD TAKEN THE CEEB TEST. ALTHOUGH DATA ARE SELF-REPORTS, COMMUNICATION WITH THE EDUCATIONAL TESTING SERVICE WHICH ADMINISTERS THE CEEB TEST INDICATES INDICATES CORRELATIONS IN THE RANTE OF +.90 IN COMPARISONS OF STUDENT SELF-REPORTS WITH ACTUAL CEEB SCORES.

NOTE: BASED ON A SAMPLE OF 1219 PERSONS IN THEIR FINAL YEAR OF TEACHER PREPARATION WHO INDICATED THAT THEY HAD TAKEN THE CEEB EXAMINATIONS.

D. Basis in the Disciplines

> "The profession is based on one or more undergirding disciplines from which it draws basic insights and upon which it builds its own applied knowledge and skills."

The survey data show that teacher preparation programs are built on a basic foundation of general liberal arts education -- the humanities, natural science, and social sciences in roughly equal proportions. Upon this foundation is built the professional (applied) portion of the training, consisting of both academic courses and clinical experience.

- Of an average 120 credit hours needed to graduate, 49.3 hours (41%) in elementary and 36.10 (30%) in secondary constitute required coursework within teacher education.

- 41 hours (34%) in elementary and 48 hours (41%) in secondary are required in liberal arts areas outside of the school of education -- language, literature, humanities, mathematics, natural and social science.

- 37.5 credit hours are required in professional coursework in elementary and 25.4 hours in secondary.

- The professional courses are complemented by 11.8 credit hours of clinical experiences in elementary and 10.7 hours in secondary.

Despite considerable inquiry and internal critique, the basic structure and emphasis of the curriculum has changed little in the past seventeen years. Neither the balance between general and professional studies nor the mix of courses within these areas has changed appreciably since Hodenfield's study in 1961, as shown in Table 2.

TABLE 2

AVERAGE SEMESTER-HOURS REQUIRED FOR ELEMENTARY AND SECONDARY TEACHER TRAINING PROGRAMS

	Hodenfield* (1961)		AACTE/ETS** (1973)		NSPPT (1976)	
	Elem	Sec	Elem	Sec	Elem	Sec
TOTAL	82.1	81.3	85.8	81.7	90.3	84.8
Liberal Arts and Science	39.3	50.7	40.8	48.2	41.0	48.7
Professional Studies	34.8	23.6	35.2	24.3	37.5	25.4
Clinical Experiences	8.0	7.0	9.8	9.2	11.8	10.7

Note: Quarter-hours have been converted to semester-hours using the formula 1 semester-hour = 30/45 quarter hour.

The only substantial change has occurred in the clinical experiences segment of teacher training, where approximately four additional credit hours are now required as compared to 1963.

The relative stability of curriculum requirements is in part due to the unchanging nature of requirements for certification and program approval. However, the NSPPT data as supported by data from the Research in Teacher Education (RITE) Project* conducted by David Clark and Egon Guba, strongly suggest that there may be a serious under-investment in the production of new knowledge through research and development.

---

* Hodenfield, G. K. and Stinnett, T. M. The Education of Teachers. (New York: Prentice-Hall, 1961)

** Sherwin, S. S. Teacher Education: A Status Report. (Princeton: Educational Testing Service, 1973)

- Only 54% of the faculty indicated interest in research; of these, only 6% spent more than 10 hours per week in activities related to knowledge production. The average reported was about 5 hours per week.

- The major type of research performed involved the development of teacher training materials. Although this constituted 25 percent of the research, it involved only an average of 1.3 hours per week (Chart 25). This type of development, however, represents the utilization of existing knowledge rather than the generation of new knowledge.

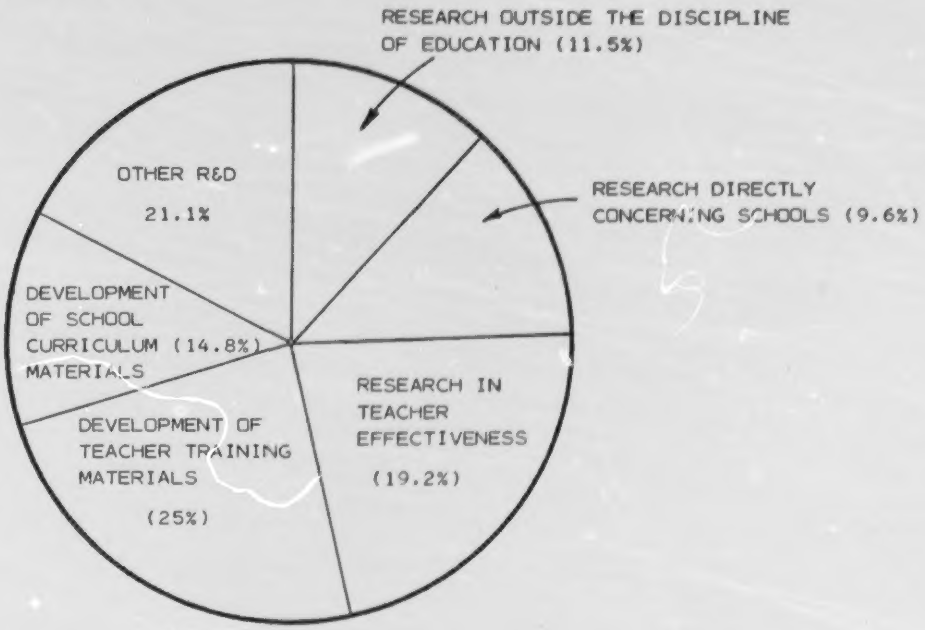
- The production of new knowledge through research in teacher effectiveness constituted 19.2% of research -- but only amounted to 1.0 hour per week.

- Research and development command a very small percentage of the institutional resources for teacher education. Overall, deans and department chairpersons indicated that 6.7% of their FTE faculty were assigned

---

* c.f. Clark, D. and Guba, E. Institutional Self-Reports on Knowledge Production and Utilization in Schools, Colleges and Departments of Education. (Indiana University, RITE Occasional Papers Series, October 1976)

CHART 25 ANALYSIS OF INDIVIDUAL FACULTY EFFORT DEVOTED TO R&D
AGGREGATE UNITED STATES AY 1975 - 1976



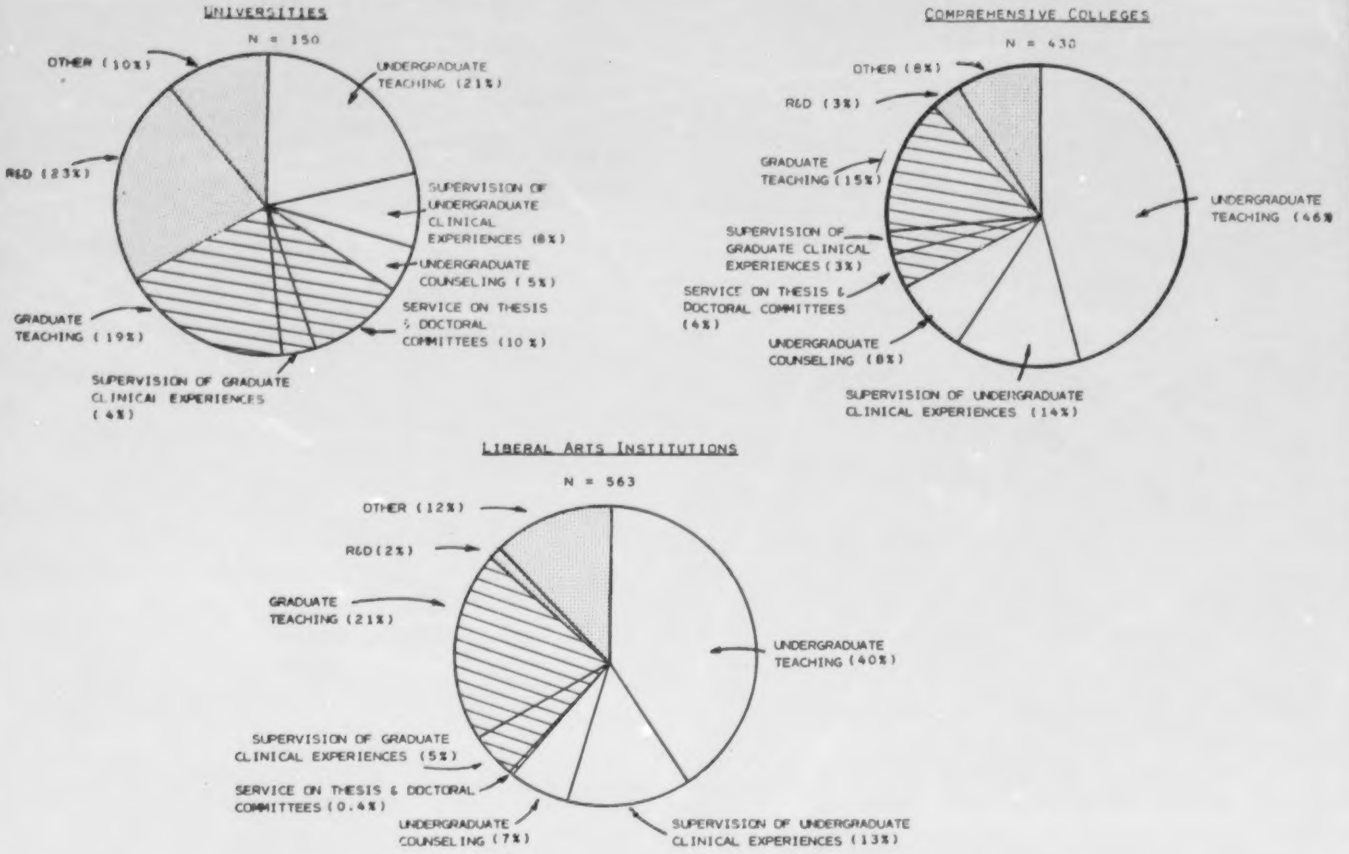
TOTAL: 5.2 HOURS PER WEEK

THE BULK OF THE SMALL AMOUNT OF R&D DONE BY FACULTY IN SCHOOLS, COLLEGES AND DEPARTMENTS OF EDUCATION IS DEVOTED TO STUDY OF TEACHER EFFECTIVENESS AND THE DEVELOPMENT OF TEACHER TRAINING MATERIALS to R&D activities; this was slightly less than the resources devoted to counseling undergraduates, 6.9%. (Chart 26)

- Chart 27 shows that the allocation of FTE faculty to research and development is well below that of the health professions. Of note is the comparison with pharmacy, which is also a four-year professional program.

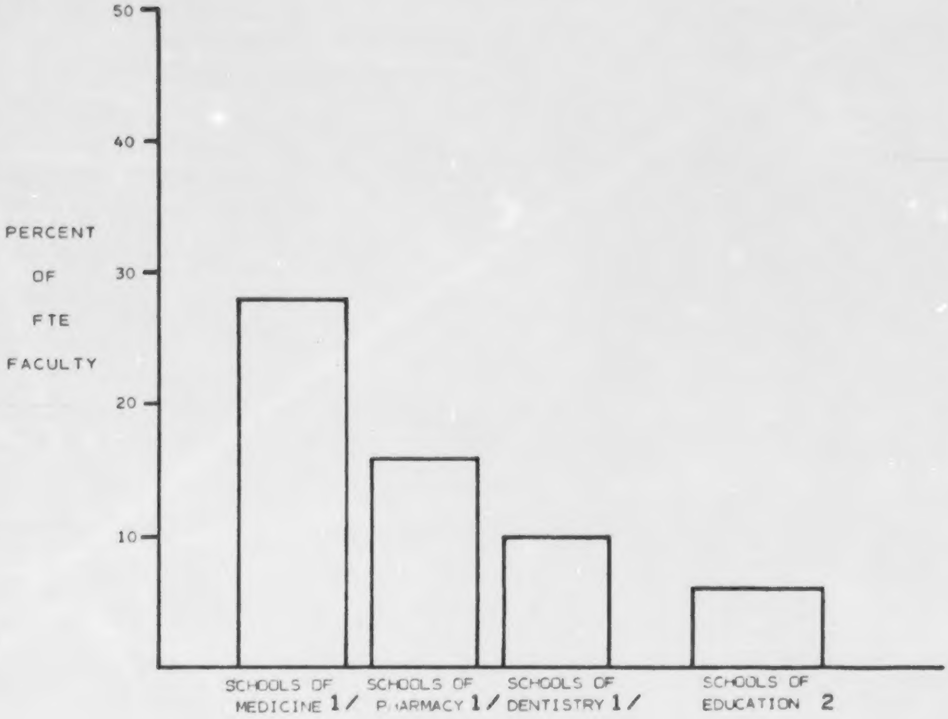
Thus, teacher education's relationship to the undergirding disciplines has not changed appreciably in the past seventeen years. The most noticeable change has been a modest increase in clinical/practical experiences intended to increase the "relevance" of teacher education. The low investment in R&D, however, may indicate that the knowledge base for teacher training may not be growing at a pace commensurate with the other professions. How basic research in teaching compares with the other humanistic disciplines (e.g., psychology or sociology) cannot be discerned from available data, but would need to be examined before firm conclusions in this area can be advanced.

CHART 26. ALLOCATION OF FACULTY FTE'S BY TYPE OF INSTITUTION
AGGREGATE UNITED STATES AY 1975-1976



DIFFERENCES IN FACULTY TIME ALLOCATIONS REFLECT DIFFERENCES IN MISSIONS AND PRIORITIES UNIVERSITIES EMPHASIZE R&D AND GRADUATE TRAINING; COMPREHENSIVE AND LIBERAL ARTS COLLEGES CONCENTRATE ON UNDERGRADUATE TRAINING.

CHART 27. FACULTY TIME DEVOTED TO RESEARCH AND DEVELOPMENT IN THE HEALTH PROFESSION



1/ COST OF EDUCATION IN THE HEALTH PROFESSIONS, NATIONAL ACADEMY OF SCIENCE, INSTITUTE OF MEDICINE, JANUARY, 1974.

2 NSPPT INSTITUTIONAL DATA - AGGREGATE. C.F. CHART 26.

E. Body of Knowledge

> "The profession collectively possesses a body of knowledge, a repertoire of behaviors and skills needed in the practice of the profession: such knowledge, behavior, and skills are not normally possessed by the non-professional."

Teacher education has recently devoted a vast amount of time to the detailed investigation and specification of such profession-related knowledge, skills, and behaviors as a part of the competency-based teacher education movement:

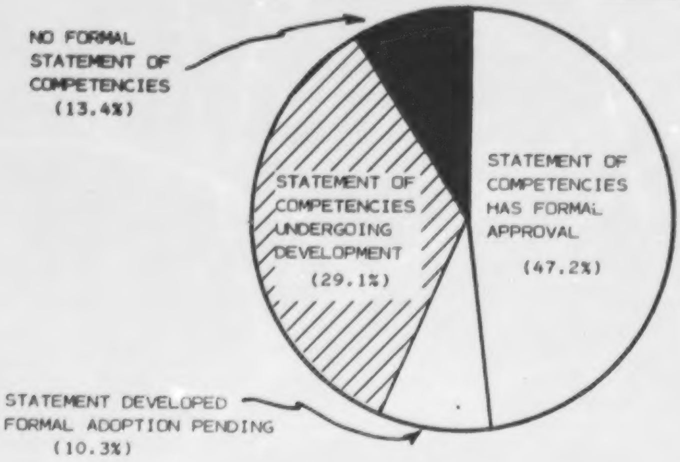
- On a self-report item, about one-half of the teacher education programs indicated that they have adopted a written, formal statement of learning objectives and competencies, an additional 34% indicated that such a statement was being developed or was pending approval; 13% indicated that the matter was not being considered. (Chart 28)

- A major shift in the basic unit of instruction from the traditional course to focused smaller units directed at developing specific competencies is underway. (Chart 29)

Thus, teacher education is moving toward the definition of essential professional skills and plans to adjust its training procedures to produce these skills in its trainees. However, the apparent under-investment in research, discussed above, leaves some serious questions concerning the essential foundation for making such major adjustments in instructional modes and programs. It may be that specification of competencies may stimulate the additional research considered so essential by the other, established professions.

CHART 28. USE OF FORMAL STATEMENTS OF LEARNING OBJECTIVES BY TEACHER EDUCATION PROGRAMS. AGGREGATE UNITED STATES

AGGREGATE UNITED STATES AY 1975-1976

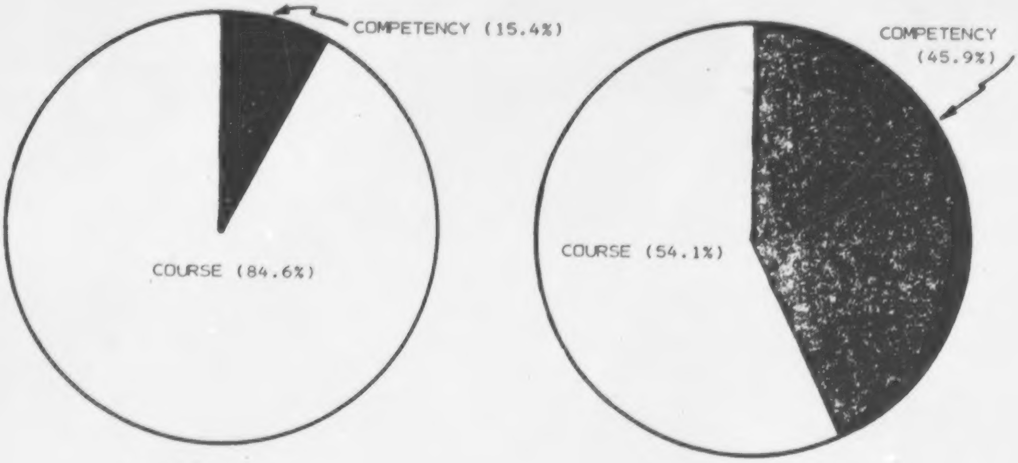


ABOUT HALF OF THE NATION'S PROGRAMS HAVE ADOPTED A WRITTEN STATEMENT OF LEARNING OBJECTIVES OR COMPETENCIES TO BE ATTAINED BY THEIR TRAINEES

CHART 29. USE OF COMPETENCIES BY TEACHER EDUCATION PROGRAMS

AGGREGATE UNITED STATES AY 1975-1976

BY 1978-1979, ABOUT HALF THE NATION'S SCHOOLS COLLEGES AND DEPARTMENTS OF EDUCATION WILL USE THE COMPETENCY AS THE BASIC UNIT OF INSTRUCTION (AS PREDICTED BY PROGRAM HEADS)



AY 1975-1976
BASIC UNIT OF INSTRUCTION

AY 1978-1979
BASIC UNIT OF INSTRUCTION

F. Field Experiences

> "The members of the profession are involved in decision-making in the service of the client, the decisions being made in accordance with the most valid knowledge available..."

Teacher education has historically struggled with the problem of seeking means for strengthening on-the-job decision-making by teachers. This conflict was raised to visible public levels in the 1950s by the writings of James Bryant Conant and James D. Koerner, who raised questions of the relative contributions of academic coursework versus clinical experience (in the schools) in the training of teachers. Because of the importance of this issue the NSPPT sought to gather information in this area by replicating in part a national survey of student teaching conducted in 1967 by Dr. James Johnson of the Northern Illinois University. A comparison of the survey data with Johnson's findings indicates that the teacher training programs are increasing the use of clinical training and seeking to integrate professional courses in theory and methods with field experiences:

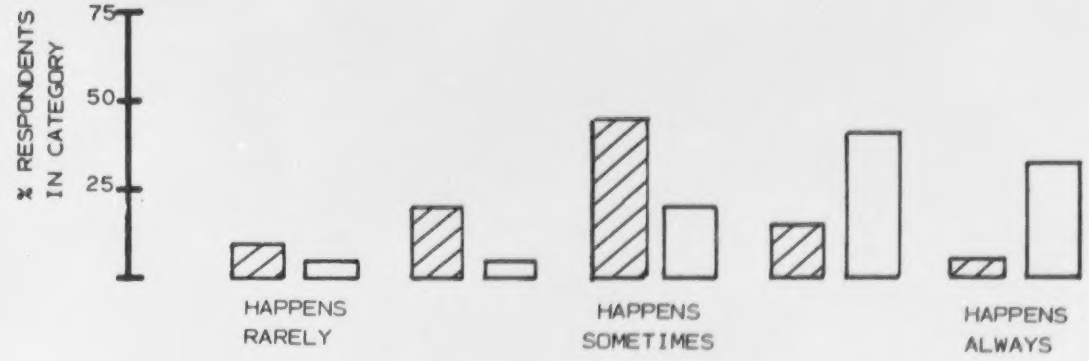
- The past nine years show a marked increase in the coordination between the concepts employed in methods and foundations courses and those skills required in clinical experience (Chart 30). Also, there appears to be a growing feedback of clinical experiences on the content of methods courses.

CHART 30. COORDINATION BETWEEN ACADEMIC AND CLINICAL TEACHER PREPARATION

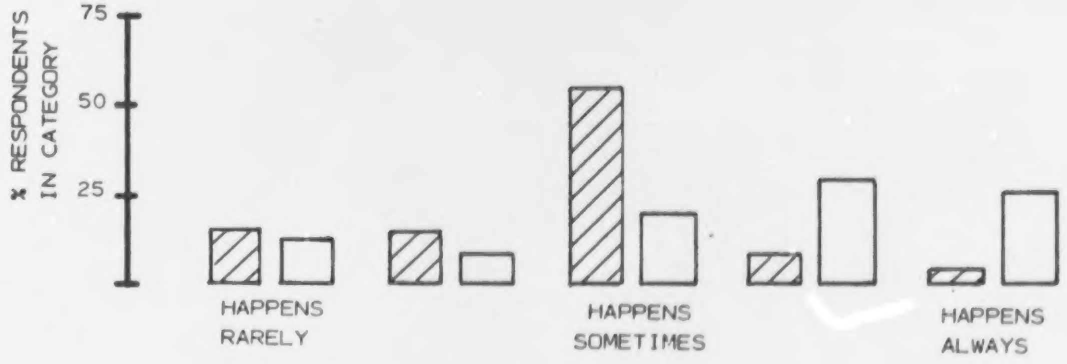
AGGREGATE UNITED STATES AY 1975-1976

ACCORDING TO REPORTS MADE BY PROGRAM HEADS THERE HAS BEEN AN INCREASE IN THE INTER-RELATION BETWEEN METHODS COURSES AND CLINICAL EXPERIENCES BETWEEN 1968 & 1975

▨ - 1968 DATA
☐ - 1975 DATA



METHODS AND FOUNDATION COURSES ARE KEYED TO CLINICAL EXPERIENCES



CLINICAL EXPERIENCES FEED BACK INTO THE DEVELOPMENT OF METHODS AND FOUNDATIONS COURSES

- There has been an increase in the total number of clock-hours of clinical experiences required. Moreover, these required courses are now distributed more broadly over the teacher preparation sequence. (Charts 31 and 32)

- By expanding the duration, sequencing, and variety of clinical experiences, teacher education had made progress toward increasing the opportunities in which academic concepts may be applied directly to the client population. This change has the promise of better preparation of new teachers for "decision-making in the service of the client".

CHART 31. TOTAL CLOCK HOURS IN CLINICAL REQUIREMENTS 1968 VS. 1975 AGGREGATE UNITED STATES

TEACHER PREPARATION PROGRAMS HAVE COME TO REQUIRE MORE TOTAL CLOCK-HOURS OF CLINICAL EXPERIENCE WITH A SHIFT IN EMPHASIS TOWARDS INCREASED TEACHING RESPONSIBILITY

TOTAL CLOCK-HOURS OF CLINICAL EXPERIENCE - BY TYPE OF ACTIVITY

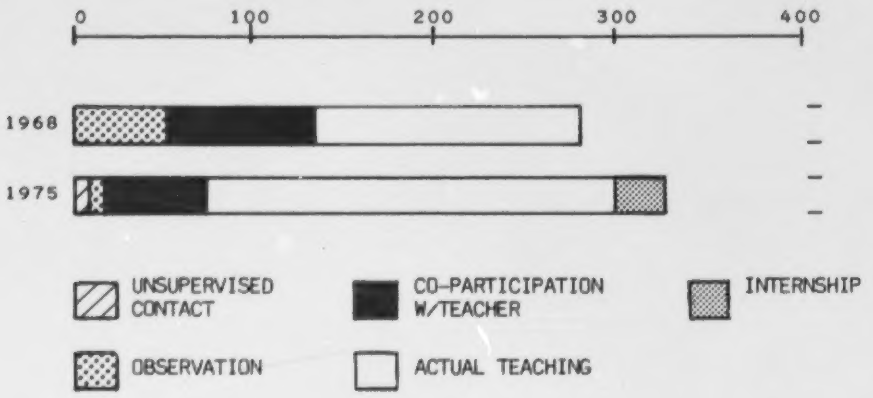
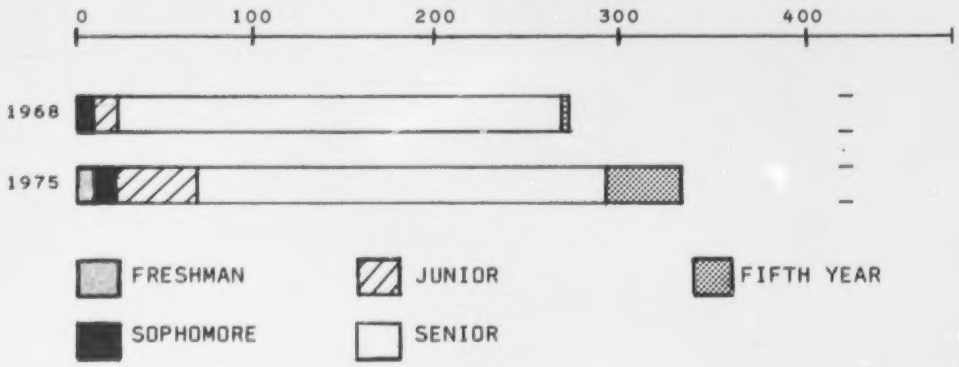


CHART 32. TIMING OF CLINICAL REQUIREMENTS - 1968 VS. 1975 AGGREGATE UNITED STATES



NOTE: TEACHER PREPARATION PROGRAMS HAVE COME TO REQUIRE MORE HOURS OF EXPERIENCE EARLIER IN THE TRAINING SEQUENCE (THE FIFTH YEAR COMPONENT REPRESENTS TRENDS IN SEVERAL STATES - PRINCIPALL CALIFORNIA - TOWARD ONE EXTRA YEAR OF TRAINING WHICH IS CHIEFLY CONCERNED WITH INTERNSHIP)

G. Personal Motivation

> "Individual practitioners are characterized by a strong service motivation and lifetime commitment to competency."

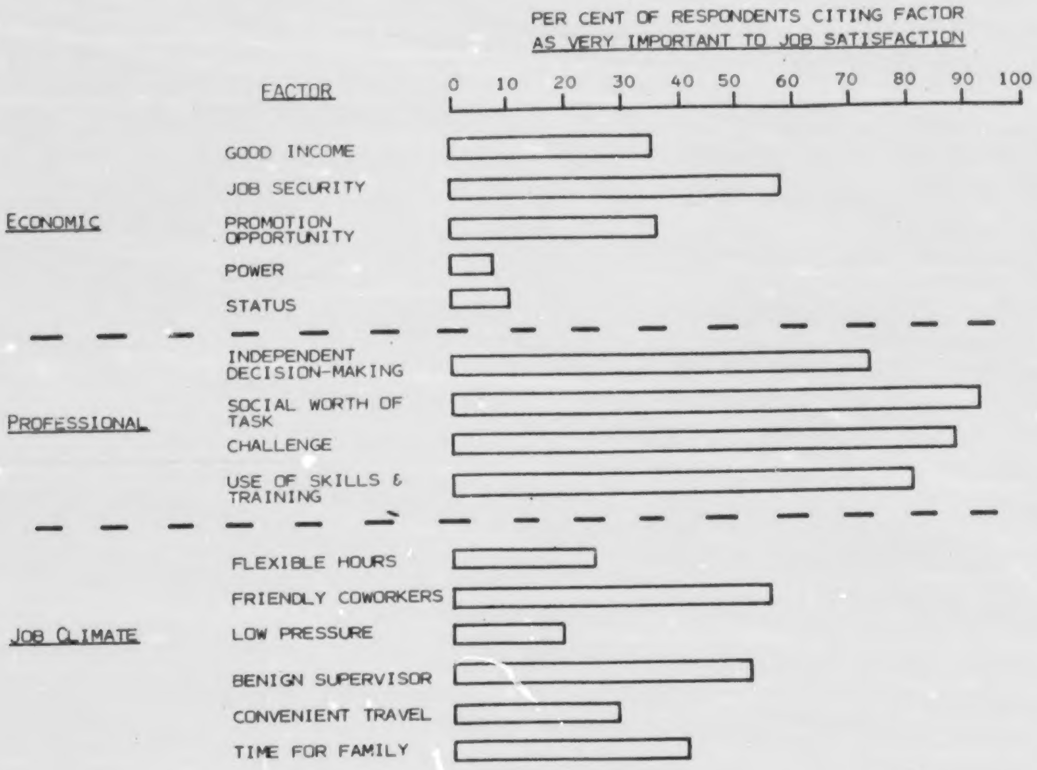
The NSPPT survey collected detailed information about student (Seniors) values concerning their anticipated work and teaching experiences. The data show clearly that this group of persons -- who represent the beginning teachers of 1976 -- have values consistent with those of an independent professional (Chart 33).

- The most important influences on new teachers' expected career satisfaction stressed professional values:
  - -- independence in decision-making
  - -- performing a job of important social worth
  - -- work with a challenge
  - -- use of the skills and training acquired in preparation.
- The need for favorable economic incentives and a convenient, amenable job climate was of considerably lesser importance.

Thus, future trainees clearly manifest a strong professional service motivation.

CHART 33. VALUES OF TEACHER EDUCATION GRADUATES CONCERNING WORK AND TEACHING

AGGREGATE UNITED STATES AY 1975-1976



SENIORS IN TEACHER PREPARATION (1975) STRESSED PROFESSIONAL VALUES AS IMPORTANT COMPONENTS OF THEIR WORK SATISFACTION

H. Summary

Teacher education appears to be making progress in moving toward the basic characteristics of the longer established professions:

- More training is being done at post-graduate levels.
- Formal selection standards are used which result in the selection of qualified persons.
- The essential knowledge and skills of the profession are being codified and adopted into the curriculum.
- Clinical experiences are gaining in importance and appear to be more firmly integrated into the academic curriculum.
- Trainees express values consistent with professional skills.

Teacher education has a low level of basic investment in R&D which appears to be linked to the slow pace of curriculum change in teacher education and may, in time, impede the advances achieved by the more positive trends.

IV. DEMOGRAPHIC CHARACTERISTICS OF RECENT GRADUATES FROM TEACHER EDUCATION PROGRAMS

Traditionally, a large portion of the teaching profession has been composed of women and persons from small town and rural backgrounds. Beyond this, many of the early institutions which were established to advance the higher education opportunities for minorities were focused on the training of teachers. The data from the National Survey of the Preservice Preparation of Teachers found little evidence of change from these historic patterns.

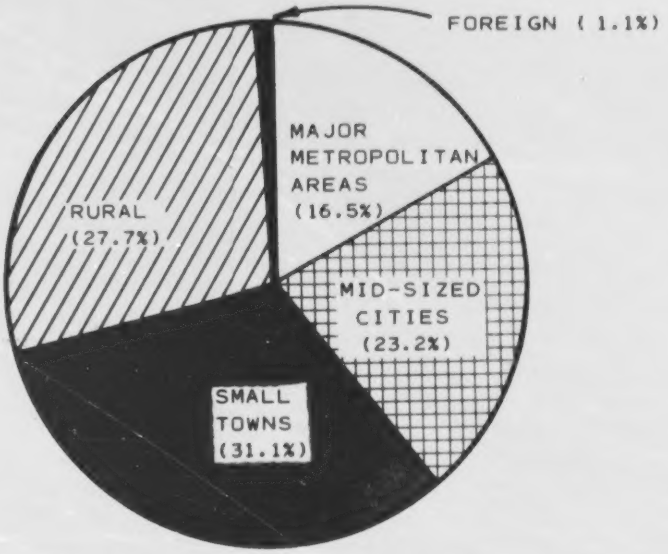
A. Sex, Age, and Geographic Background

The new graduates are 72.5% women, drawn mainly from small towns and rural areas, and have a large proportion of persons who are over twenty-four years old (Charts 34 and 35). The results of seven institutional care studies show that this "older group is a growing section of the population, and represents a segment -- composed largely of women -- who are seeking to achieve professional levels of work through the teaching profession".

B. Ethnic Background

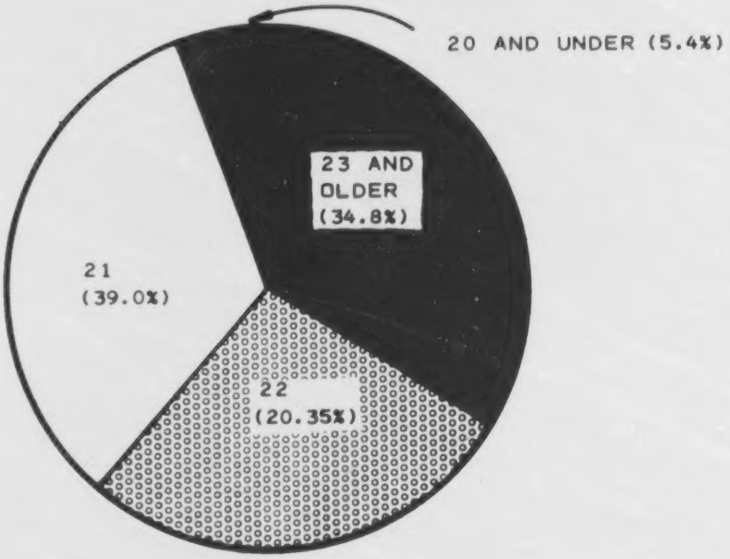
Approximately eleven percent of the recent graduates are from minority ethnic backgrounds; proportional participation by minority groups has not changed significantly from 1973 to 1976. Due to the decreased numbers of persons enrolled in teacher preparation, the actual number of minority persons preparing to be teachers may have been cut by one-third. (Chart 36)

CHART 34 GEOGRAPHIC BACKGROUND OF TEACHER GRADUATES
AGGREGATE UNITED STATES AY 1975 - 1976



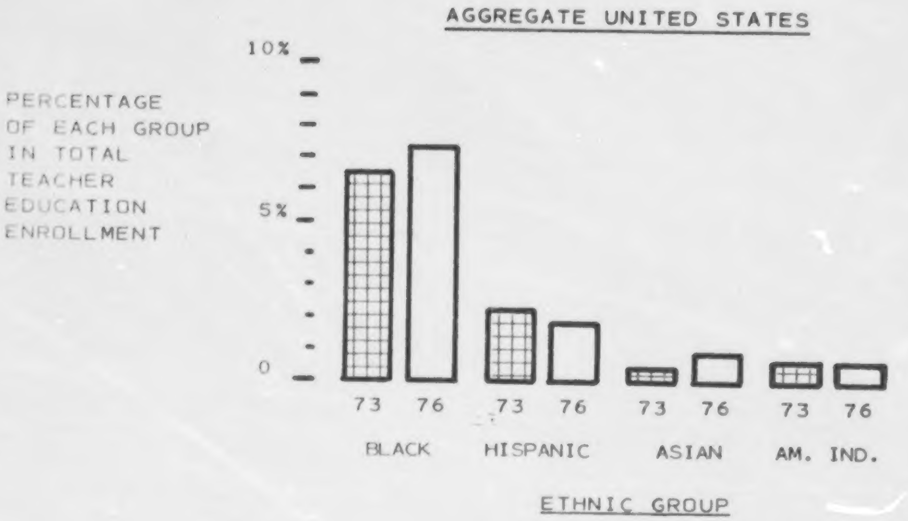
THE DISTRIBUTION OF SENIORS IN TEACHER PREPARATION, 1975 CONFIRMS MANY SOCIOLOGICAL SPECULATIONS THAT TEACHERS ARE DRAWN PRIMARILY FROM RURAL AND SMALL-TOWN BACKGROUNDS

CHART 35 AGE DISTRIBUTION OF TEACHER GRADUATES
AGGREGATE UNITED STATES AY 1975 - 1976

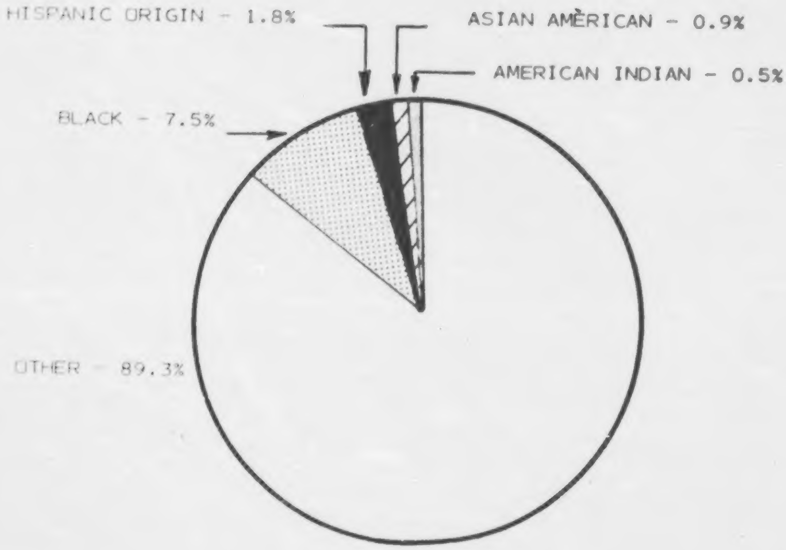


THE AGE DISTRIBUTION OF STUDENTS REVEALS THAT A LARGE SEGMENT OF OLDER PERSONS ARE RECEIVING PREPARATION AS TEACHERS

CHART 36. ETHNIC BACKGROUND OF TEACHER GRADUATES



ENROLLMENT IN TEACHER EDUCATION BY MINORITIES HAS CHANGED VERY LITTLE, ON A PERCENTAGE BASIS BETWEEN AY 1972-73 AND AY 1975-76



C. Family Background

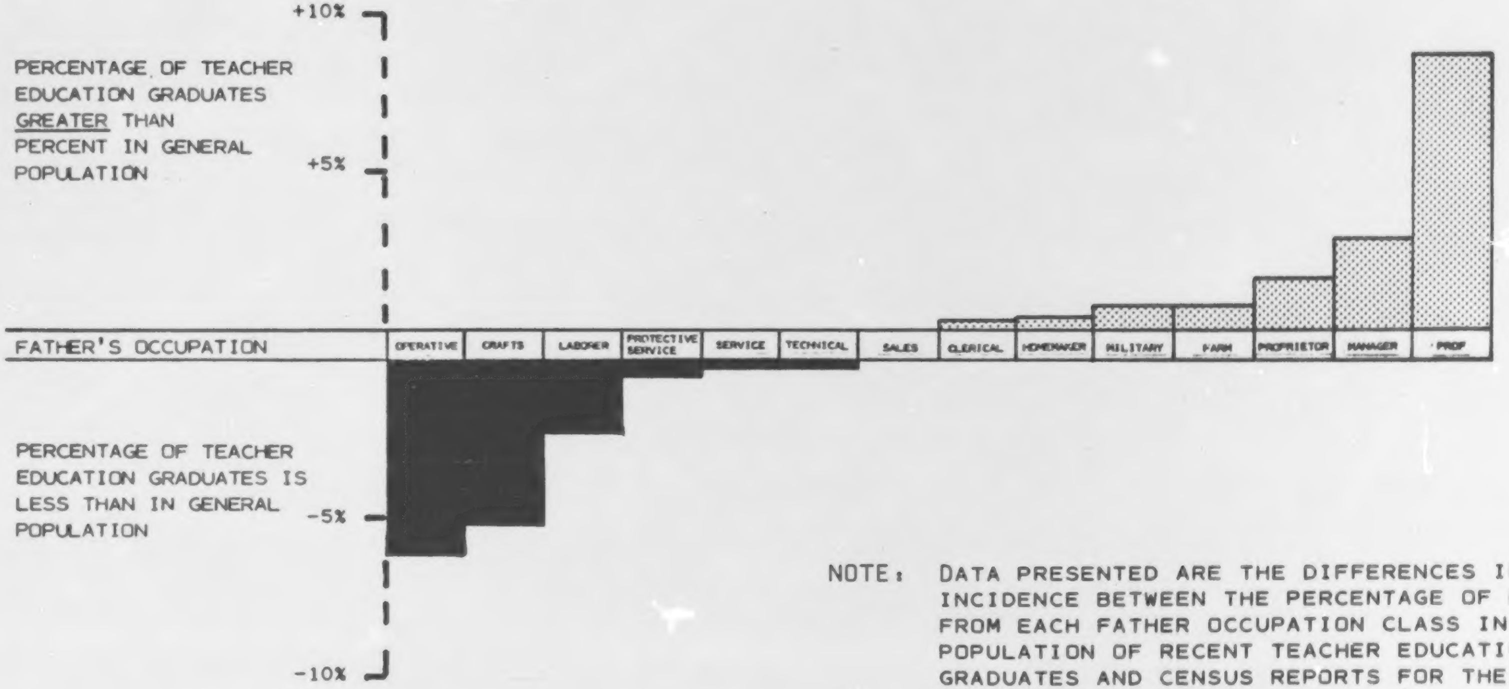
Teacher education graduates are drawn from all segments of the population with a slight bias toward managerial and professional families. Chart 37 shows the breakdown of recent graduates by the principal occupation of their father. Approximately four percent of these graduates came from families where the father was a teacher. (In addition, eleven percent indicated that their mother was a teacher.)

D. Participation by Minorities Across Fields of Training and Types of Institutions

Within the 12.1% minority teachers, the largest portion were Blacks (7.5%), followed by Hispanics (1.8%), Asians (0.9%), and American Indians (0.5%). Minorities participate in much higher rates in occupational/vocational (16%) and school service (12.5%) fields, both of which have high current prospects for employment. However, minority persons have a much lower than average participation in special education (8%). (Chart 38)

Chart 39 shows that minority enrollment is concentrated in public comprehensive colleges. Conversely, persons from minority backgrounds participate to a much smaller extent than non-minorities in private institutions and in university programs. In several states (e.g , Texas, Louisiana, Mississippi, North Carolina, and Alabama), many public comprehensive colleges represent the remnants of a previously segregated higher education system. On the other hand, the public comprehensive college may represent the lowest cost higher education opportunity available to all residents. The concentration of minorities in such institutions may result from historical precedent, geographical location, and financial need rather than any nationwide pattern of discrimination.

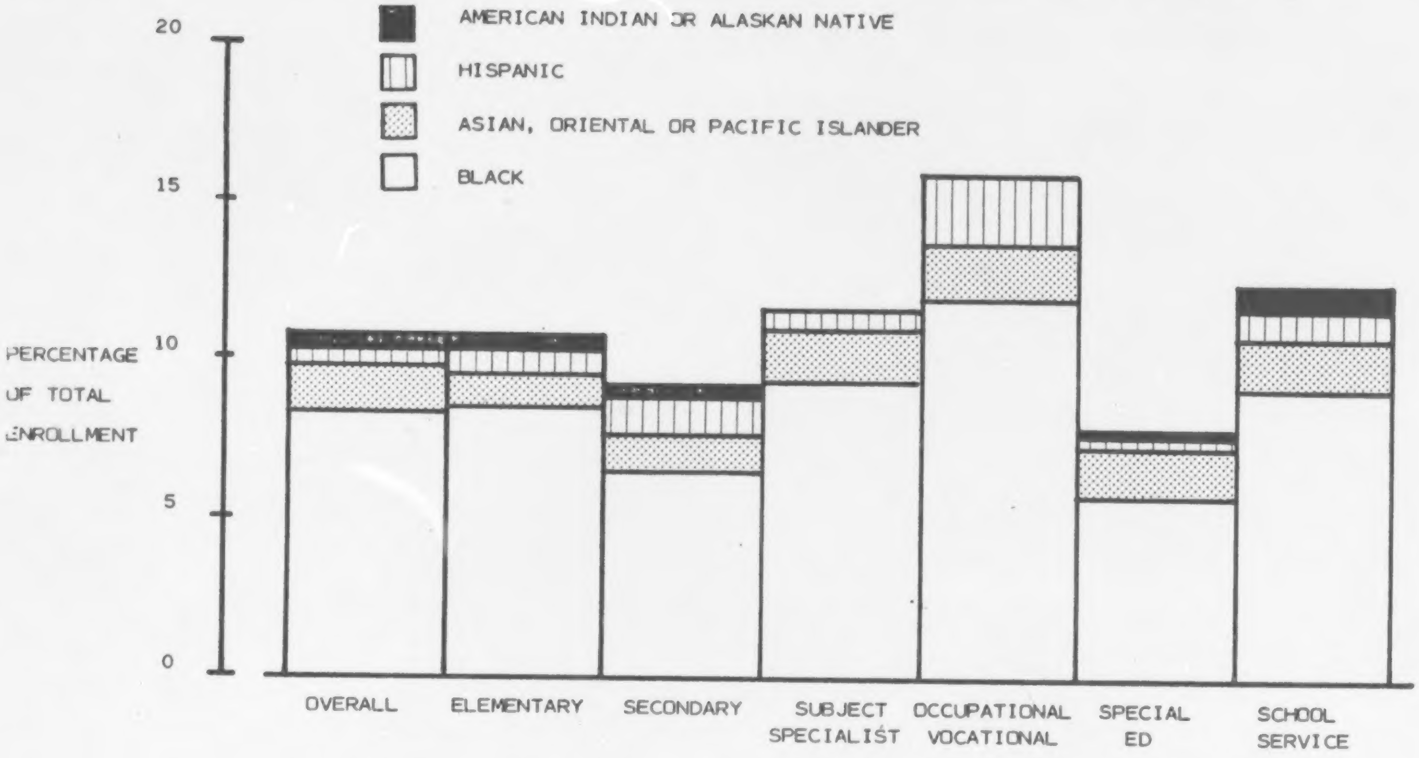
CHART 37. FAMILY BACKGROUND OF RECENT TEACHER EDUCATION GRADUATES
AGGREGATE UNITED STATES AY 1975-1976



NOTE: DATA PRESENTED ARE THE DIFFERENCES IN INCIDENCE BETWEEN THE PERCENTAGE OF PERSONS FROM EACH FATHER OCCUPATION CLASS IN THE POPULATION OF RECENT TEACHER EDUCATION GRADUATES AND CENSUS REPORTS FOR THE GENERAL POPULATION

CHART 38. DISTRIBUTION OF BEGINNING TEACHERS FROM MINORITY BACKGROUND BY FIELD OF SPECIALIZATION

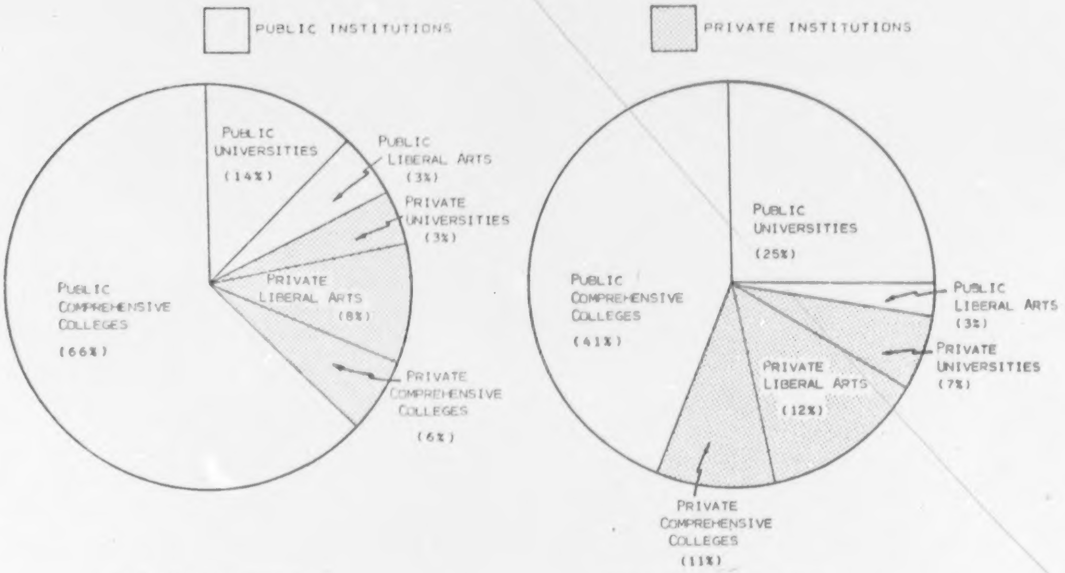
AGGREGATE UNITED STATES AY 1975-1976



MINORITIES HAVE ABOVE AVERAGE PARTICIPATION IN SCHOOL SERVICE AND OCCUPATIONAL/ VOCATIONAL PROGRAMS. THEIR ABSENCE IS MOST SIGNIFICANTLY NOTED IN SPECIAL EDUCATION

CHART 39. DISTRIBUTION OF MINORITY AND NON-MINORITY BEGINNING TEACHERS ACROSS INSTITUTION TYPES

AGGREGATE UNITED STATES AY 1975-1976



MINORITY GRADUATES
WITH CERTIFICATES TO TEACH
N = 27500

NON-MINORITY GRADUATES
WITH CERTIFICATION TO TEACH
N = 199900

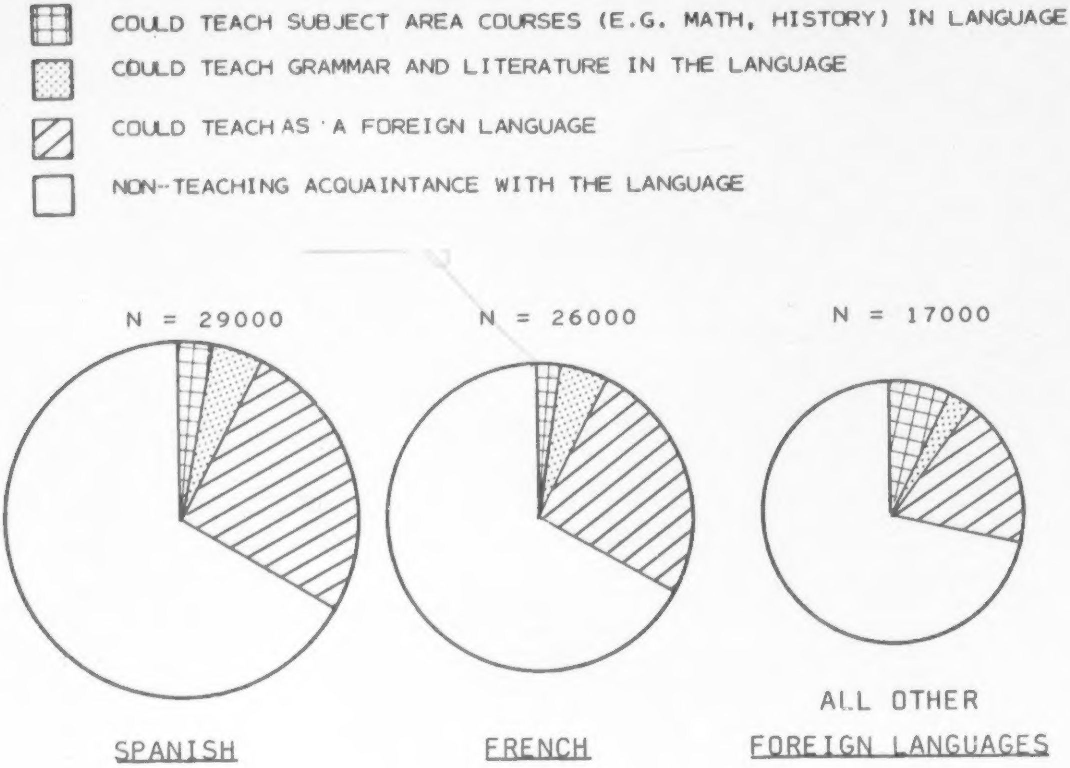
MINORITY TEACHER CANDIDATES ARE HIGHLY CONCENTRATED IN PUBLIC COMPREHENSIVE COLLEGES, UNDER-REPRESENTED IN UNIVERSITIES AND PRIVATE SCHOOLS.

E. Linguistic Capabilities

Recent graduates do not bring extensive skills in foreign languages to the teaching profession (Chart 40). The 1975-1976 graduates do not have or graduate with a command of foreign languages which would be required for widespread implementation of bilingual education programs: fewer than three-tenths of one percent (0.3%) of the recent graduates have sufficient linguistic competencies to participate in such efforts.

In summary, the recent graduates from teacher preparation institutions are predominantly female, white, middle class, and English speaking, consistent with historic patterns.

CHART 40. LINGUISTIC CAPABILITIES OF RECENT TEACHER GRADUATES. AGGREGATE UNITED STATES AY 1975-1976



THE LINGUISTIC CAPABILITIES OF RECENT TEACHER EDUCATION GRADUATES ARE NOT COMMENSURATE WITH MASSIVE PLANS FOR BILINGUAL EDUCATION

V. EXPERIMENTAL DEVELOPMENTS AND THEIR IMPACT ON TEACHER PREPARATION

The literature on teacher education for the past fifteen years has brought forth a multitude of innovative strategies for the training of teachers. One of the stated purposes of the NSPPT was to track the extent to which innovative methods had permeated the mainstream of teacher education.

The process began with an extensive review of the literature on innovative developments. Based on this review, the following structure was developed for the classification of such innovations:

- "Reality" education: The trend toward conducting a larger portion of teacher training in a clinical setting. The chief examples of the "reality" education movement are found on a continuum of integration of field experiences with training, including teacher centers, field-based programs, and microteaching.
- Competency-based education: Which represents the training of teachers in a situation in which the profession-related skills to be obtained by the study are made explicit and the student is held accountable for obtaining them.
- Instruction technology: Advances in the fields of media and communications have made the use of devices such as videotape and computers in the training of teachers possible.

The NSPPT was designed to provide a basic "snapshot" of teacher preparation as an entity at a given period during AY 1975-1976; it did not focus upon specific innovative programs, but rather, provides a representative national picture of the extent to which a variety of practices (both traditional and "innovative") are spread throughout teacher education. It is possible to employ previous surveys, notably those of Johnson* and the AACTE/ETS** to establish trends in the process of adoption of innovations.

The remainder of this section is devoted to the discussion of the extent to which each of the major categories of innovation have become a part of teacher preparation.

A. "Reality" Education

Operating under the philosophy of "learning by doing", a wide variety of experimenters have undertaken programs which blur the distinction between professional coursework and clinical experiences. These experiments represent an attempt to minimize the difficulties which often occur when knowledge is transplanted from the college classroom to the actual school setting.

Teacher education programs which incorporate the concept of reality education into their curricula provide students with early and continuous exposure to the actual teaching situation. This is generally accomplished through the use of teacher centers, early field experiences, or microteaching, as discussed below.

---

* Johnson, J. A. A National Survey of Student Teacher Programs. (DeKalb, Illinois: Northern Illinois University), 1968.

** Sherwin, S. S. Teacher Education: A Status Report. (Princeton, ETS/AACTE), 1973.

1. Teacher Centers

Teacher centers (also referred to as teacher education schools and renewal centers) are partnerships between the public school system and the teacher-training system. Their object is to bring university instruction and the learning activities of the public school closer together.

While teacher centers differ in design, they are generally training complexes or places where public schools, colleges and universities, community members and public agencies can bring their resources together to shape teacher training activities. At the preservice level, trainees are provided with teaching experiences in these centers and are usually supervised by an interdisciplinary team.

Although research in the effectiveness of teacher centers is limited, a review by Young* indicates that they may be quite beneficial in terms of:

- Providing the student teacher with exposure to a broad variety of instructional media and teaching styles.
- Fostering a style of instruction which encourages pupil participation.
- Developing imaginative and stimulating teacher behaviors.

---

* Young, D. B. "Teacher Centers Make A Difference." Paper presented at AERA: Minneapolis, March 1970, ERIC ED 044356.

The NSPPT investigated the extent to which institutions are involved in teacher centers. It is possible to compare these data with those of Johnson.* The results are shown in Table 3.

The data indicate that the teacher center movement has grown somewhat in the past nine years. In 1968, Johnson found that 22% of the institutions were affiliated with teacher centers; by 1975, thirty-six percent of the institutions had become involved with such centers.

The Johnson data do not permit any further analysis; however, the NSPPT data may be subjected to further treatment:

- In general, teacher centers are consistent with the philosophy of "reality" education in that more than three-quarters of the institutions who are involved are affiliated with centers located in the schools.
- Sixty-four percent of the public institutions were involved with teacher centers as opposed to nineteen percent of the private institutions. However, 101 of the 110 centers located _on campus_ were in public institutions.
- Teacher centers appear to be very attractive to universities: 73% of the universities were affiliated with teacher centers as contrasted with 49% of the comprehensive colleges and 17% of the liberal arts institutions.

---

* Johnson, _op_. _cit_.

TABLE 3

INVOLVEMENT OF INSTITUTIONS WITH TEACHER CENTERS BY TYPE OF INSTITUTION AND LOCATION OF TEACHER CENTER

AGGREGATE UNITED STATES AY 1975-1976

TYPE OF INSTITUTION	JOHNSON* (1968)	N.S.P.P.T. 1975		
		TOTAL INSTITUTIONS WITH CENTERS	INSTITUTIONS WITH CENTERS ON-CAMPUS	INSTITUTIONS WITH CENTERS IN LEA
ALL INSTITUTIONS COMBINED	253 (22%)	413 (36%)	110 (10%)	303 (26%)
ALL PUBLIC INSTITUTIONS N=424	-	272 (64%)	101 (24%)	171 (40%)
ALL PRIVATE INSTITUTIONS N=727	-	141 (19%)	9 (1%)	132 (18%)
UNIVERSITIES N=150	-	109 (73%)	40 (27%)	69 (46%)
PUBLIC N=97	-	76 (78%)	31 (32%)	45 (46%)
PRIVATE N=53	-	33 (62%)	9 (17%)	24 (45%)
COMPREHENSIVE COLLEGES N=438	-	216 (49%)	70 (16%)	136 (33%)
PUBLIC N=303	-	196 (65%)	70 (23%)	126 (42%)
PRIVATE N=135	-	10 (7%)	0 (0%)	10 (7%)
LIBERAL ARTS N=563	-	98 (17%)	0	98 (17%)
PUBLIC N= 24	-	0	0	0
PRIVATE N=539	-	98 (18%)	0	98 (18%)

* Johnson, _op_. _cit_.

- 78% of the public universities were affiliated with teacher centers. However, this group also had the highest percentage of centers which were located on-campus.

- Liberal arts institutions reported exclusive participation with teacher centers located in the schools.

The apparent commitment to teacher centers located in the LEA may, however, reflect a resource factor in addition to a commitment to reality education, as shown in the analysis of NSPPT data on the sources of funding for teacher centers, as presented in Table 4.

TABLE 4

SOURCES OF FUNDING FOR TEACHER CENTERS BY LOCATION OF TEACHER CENTER. DATA ARE THE AVERAGE PERCENTAGE CONTRIBUTION FOR EACH SOURCE OF FUNDING. AGGREGATE UNITED STATES, AY 1975-1976.

Location of Teacher Campus	Education Unit	Local Education Agency	Federal or State Government	Other Sources
On-Campus	51.4%	28.6%	15.7%	4.2%
In Schools	15.0%	51.0%	31.6%	2.4%

The substantial resource contributions of local education agencies and those of government cannot be discounted as a factor in the attractiveness of teacher centers -- particularly those in the schools. This would shed some light on the apparent exclusive preference of the resource-poor liberal arts institutions for teacher centers located in the local education agency.

Teacher centers have grown in popularity; in 1975, 36% of the institutions reported such affiliations with centers, up from 22% in 1968. Of 413 institutions reporting affiliations, 303 indicated that the center was located in the schools. However, any commitment to reality education deduced from these data must be tempered by the fact that institutions of higher education contribute only 15% of the funds to the operation of teacher centers located in LEAs. The data are evidence of increasing cooperation between the schools and institutions of higher education in the preparation of teachers.

2. Early Field Experiences

Some innovations in teacher education have emphasized field experiences, and start with clinical experience early in the prospective teacher's program. Such experiences often take the form of teaching assistantships in the public schools, with the bulk of teacher training still remaining within the college or university. They can, however, run the continuum to full-time student placement in the public schools with professional coursework provided to the students at the public school site by college or university personnel.

The NSPPT data shown in Charts 31 and 32 have documented the trend toward early field experiences and a broader differentiation of roles.

The analysis shown in Table 5 reflects the influence of the early field experiences movement.

TABLE 5

TEACHER TRAINEE ROLES IN FIELD EXPERIENCE BY YEAR. DATA ARE THE PERCENTAGES OF CLOCK-HOURS IN EACH ACTIVITY IN EACH YEAR AS REPORTED BY THE HEADS OF INDIVIDUAL TEACHER EDUCATION PROGRAMS. AGGREGATE UNITED STATES, AY 1975-1976.

TYPE OF ACTIVITY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	FIFTH
UNSUPERVISED CONTACT[1]	39%	7%	1%	-	-
OBSERVATION	37%	25%	20%	2%	2%
CO-PARTICIPATION WITH A TEACHER	24%	55%	67%	30%	16%
ACTUAL TEACHING	-	13%	12%	63%	40%
INTERNSHIP	-	-	-	5%	42%
	100%	100%	100%	100%	100%

[1] UNSUPERVISED CONTACT INCLUDES THOSE EXPERIENCES IN WHICH THE STUDENT IS EXPECTED TO ACCUMULATE A SPECIFIED NUMBER OF HOURS IN CONTACT WITH PUPILS (E.G., RECREATION WORK OR RESIDENTIAL EXPERIENCES).

The data show a gradual progression from unsupervised contact through actual teaching during the entire program of teacher preparation.

> The early field experiences movement has had an effect in bringing teacher education into congruence with the "reality" of the classroom. Teacher trainees receive a gradual exposure to teaching, often beginning in the freshman year, in a broadly differentiated set of roles.

3. Microteaching

A family of techniques known as "microteaching" has grown up around the twin concepts of laboratory control and learning-to-teach-by-teaching. The intent of microteaching techniques is to provide the student with an opportunity to teach to real pupils while retaining the ability to control extraneous variation by doing the training on the college campus in a laboratory-like situation. The process of microteaching assumes that the teaching role can be analyzed into a series of discrete units and that training in these discrete units can be synthesized into effective teaching; the paradigm for microteaching is as follows:

(1) The student receives systematic exposure to a specific teaching situation.

(2) The student is given opportunity to practice the technique in a short lesson with 4-5 pupils.

(3) A recording of the practice lesson is made (often using videotape) for viewing by the student.

(4) A critique of the lesson is provided by a specially trained supervisor.

(5) The student is provided with the opportunity to re-plan and re-teach the lesson to another small group of pupils. This session may also be recorded and critiqued for the student by a supervisor.

Research* has indicated that microteaching has limited effects in changing teaching behaviors except under circumstances where one-one interaction between trainee and supervisor takes place. The implication is that microteaching is at worst ineffective and at best very costly in terms of both labor and equipment. Thus, one would expect the institution and/or individual teacher education program to consider the resource question very carefully in any decision to adopt microteaching.

The NSPPT survey of faculty inquired about the use of microteaching within the teacher preparation program. These results, along with data from Johnson's** survey and that of the AACTE/ETS*** are presented in Table 6.

---

* c.f. McDonald, F. J. "A Behavior Modification View of Microteaching". Paper presented at AERA, April, 1973 ERIC ED 076561.

** Johnson, op. cit.

*** Sherwin, op. cit.

TABLE 6

EXTENT OF USE OF MICROTEACHING
IN TEACHER EDUCATION PROGRAMS.
AGGREGATE UNITED STATES, AY 1975-1976

Johnson 1968	AACTE/ETS 1973	NSPPT 1975
16.0%	77.0%	38.8%

Thus, it appears that microteaching has declined in use after being widely implemented. Given the resource problems associated with teacher education during the past few years, it is likely that the high costs associated with microteaching have contributed to its decline.

> Microteaching, a technique which combines laboratory control with actual teaching, came to enjoy great popularity in the period 1968-1977. However, the technique is essentially very costly. During the period 1973-1975, which was associated with enrollment decline and tight resources, microteaching has decreased in usage in teacher education.

B. Competency-Based Education

The movement toward accountability in teaching gave powerful impetus toward the explicit statement of the competencies required for the fulfillment of the professional role of the teacher and in the structuring of teacher education around these competencies. To date, this movement has had considerable impact upon education at the state level; nineteen states have made competency-based teacher education mandatory. Given these forces, the NSPPT conducted an investigation of the extent to which the competency-based movement had spread throughout teacher education.

1. Presence of Statements of Learning Objectives or Competencies

Cooper and Weber* define a competency-based (or performance-based) teacher education program as "a program in which the competencies to be acquired by the student and the criteria to be applied in assessing the competency of the student are made explicit and the student is held accountable for meeting these criteria".

Accordingly, the NSPPT began its investigation of competency-based teacher education by inquiring into the existence of statements of learning objectives or competencies which are the theoretical preconditions to such programs. As documented in Chart 28 (above), about half of the teacher education programs have adopted some form of statement of competencies to be attained by teacher trainees.

---

* Cooper, J. and Weber, W. Competency-Based Education: A Scenario. (Washington, D. C.: American Association of Colleges for Teacher Education, 1972.)

2. Nature of Competency Statements

Schalock* summarized the three basic forms which the competency statement may take:

(1) Knowledge criteria which are used to assess the cognitive understanding of topics related to effective professional performance.

(2) Performance criteria which are used to assess the teaching behaviors and give evidence of the attainment of profession-related skills.

(3) Product criteria which are used to assess the trainee's ability to teach by examining the achievement of pupils taught by the trainee.

The NSPPT investigated the extent to which each of these definitions had been employed in producing the statements of competencies. Heads of individual teacher preparation programs were asked to select only one of the (above) three definitions as "best", approximately the definition of "competency" or "learning objective" in this program. The data from this inquiry are presented in Table 7, on the following page.

The data indicate that the predominant definition used in the specification of competencies is that of the profession-related skill, followed closely by the more traditional knowledge definition. Only 5.7% of the programs have moved toward the assessment of teacher trainees based upon the achievement of the pupils which they teach.

---

* Schalock, H. D., et. al. A Plan for Managing the Development, Implementation, and Operation of a Model Elementary Teacher Education Program. (Monmouth, Oregon: Oregon College of Education, 1970.)

TABLE 7. PREDOMINANT DEFINITION OF 'COMPETENCY' OR 'LEARNING OBJECTIVE' USED IN PROGRAMS OF TEACHER PREPARATION; BY FIELD OF TRAINING. DATA ARE WEIGHTED NATIONAL ESTIMATES BASED ON A PROBABILITY SAMPLE OF 505 PROGRAMS. FALL, 1975.

	PRODUCT CRITERIA		PERFORMANCE CRITERIA		KNOWLEDGE CRITERIA		OTHER CRITERIA		NO STATEMENT OF COMPETENCIES	
FIELD OF TRAINING	NUMBER OF PROGRAMS	PERCENT	NUMBER OF PROGRAMS	PERCENT	NUMBER OF PROGRAMS	PERCENT	NUMBER OF PROGRAMS	PERCENT	NUMBER OF PROGRAMS	PERCENT
ALL FIELDS COMBINED	197	5.7	1635	47.2	961	27.8	202	5.8	467	13.4
ELEMENTARY	56	5.2	599	55.3	229	21.2	53	4.9	139	12.9
SECONDARY	85	7.3	532	45.9	288	24.9	73	6.3	181	15.6
SPECIAL EDUCATION	17	3.4	280	55.4	126	25.0	30	5.8	61	11.9
OCCUPATIONAL/VOCATIONAL	30	7.2	127	30.4	192	45.9	20	4.8	49	11.7
SCHOOL SUPPORT	9	3.2	97	32.8	126	42.7	26	8.7	37	12.6

Within the various fields of specialization, elementary, secondary and special education programs follow this general trend toward the specification of competencies in terms of profession-related skills. However, within the fields of occupational/vocational education and school support personnel preparation, knowledge criteria predominate.

3. Faculty Resources Available for Competency-Based Teacher Education

The transition of American teacher education to competency-based teacher education (CBTE) will require a considerable base of experience on the part of teacher education faculty in the development of such programs. The NSPPT sought to determine the extent to which faculty had gained experience with CBTE; accordingly, questions were asked on the questionnaire for faculty about the presence, nature, and duration of CBTE-related experience. These data are summarized in Table 8, on the following page.

The data indicate that for all types of institutions, approximately three-quarters of the faculty have had some experience with CBTE and that this experience is of approximately three years (2.6) duration. The most frequently found type of experience was in the development of CBTE courses or units (57%), followed by teaching of such courses (48%). Approximately forty percent of the faculty had some experience in the evaluation of CBTE programs.

While the distribution of faculty with CBTE experience was relatively uniform across types of institutions, several points of qualitative interest were noted:

TABLE 8. NATURE OF FACULTY INVOLVEMENT WITH COMPETENCY-BASED TEACHER EDUCATION (CBTE); BY TYPE OF INSTITUTION. DATA ARE WEIGHTED NATIONAL ESTIMATES BASED ON A PROBABILITY SAMPLE. FALL, FALL, 2975.

	PERCENT OF ALL FACULTY WITHIN INSTITUTION TYPE						
INSTITUTION TYPE	PERCENT REPORTING NO EXPERIENCE WITH CBTE	PERCENT REPORTING SOME EXPERIENCE WITH CBTE	EXPERIENCE IN DEVELOPMENT OF CBTE COURSES OR UNITS	EXPERIENCE IN TEACHING OF CBTE COURSES OR UNITS	EXPERIENCE IN EVALUATION OF CBTE COURSES OR UNITS	OTHER CBTE EXPERIENCE	PERSON-YEARS EXPERIENCE WITH CBTE
ALL INSTITUTIONS COMBINED	26.2	73.8	57.4	48.1	37.8	9.9	2.6
ALL PUBLIC INSTITUTIONS	24.2	75.8	59.5	50.8	41.1	9.8	2.9
ALL PRIVATE INSTITUTIONS	31.2	68.8	51.9	41.2	29.4	10.1	2.3
UNIVERSITIES	27.1	72.9	55.8	45.7	40.8	9.7	2.9
PUBLIC	27.7	72.3	53.0	41.5	37.8	10.3	3.1
PRIVATE	24.3	75.7	68.6	65.1	55.0	7.0	2.7
COMPREHENSIVE COLLEGES	23.6	76.4	61.2	53.3	40.3	8.9	2.6
PUBLIC	20.5	79.5	64.9	57.5	43.8	8.2	3.0
PRIVATE	36.7	63.3	45.7	35.6	25.5	11.7	2.1
LIBERAL ARTS	33.7	66.3	46.4	34.0	22.3	13.8	2.0
PUBLIC	52.2	47.8	30.7	27.2	27.2	30.7	1.5
PRIVATE	29.6	70.4	49.8	35.5	21.3	10.0	2.3

NOTE: ROW PERCENTAGES DO NOT ADD TO 100% BECAUSE OF PERMISSIBLE MULTIPLE RESPONDING ON QUESTIONS DEALING WITH THE NATURE OF CBTE EXPERIENCE.

- Faculty in public institutions reported more CBTE experiences than those in private institutions.
- Faculty in comprehensive colleges reported the most CBTE experiences while those in liberal arts institutions reported the least.
- In general, university faculty reported the most years of experience with CBTE.

The data show that teacher education has had a variety of experiences with CBTE; however, this experience is of relatively brief duration, occurring generally within the past three or four years. Thus, the character of faculty resources for the development of CBTE is one of breadth, not depth.

> The movement towards accountability in teaching has stimulated the development of techniques for teacher training keyed to profession-related competencies. Approximately half the nation's teacher education programs have adopted statements of competencies or learning objectives, which are stated chiefly in terms of skills and knowledge to be possessed by the teacher. Approximately three-quarters of the teacher education faculty have had some experience with competency-based instruction, but at an average depth of less than three years.

C. Instructional Technology

Many recent developments in media and communications have held the promise that technology could make a substantial contribution to education in general and teacher-training in particular. The following discussion treats the frequency of use of five major applications of technology in the professional education of teachers as identified in a 1970 study by the Associated Organizations for Teacher Education.* This paper cannot, however, treat questions related to the effects of instructional technology on productivity, individualization or improved access to education.

1. Simulations

Simulation is defined as "representation of several variables in the same arrangement as they occur in a particular natural or artificial system. Once such arrangements or conditions are established, the resultant display can be seen as a model of reality which may be amendable to interaction and manipulation."**

Simulations are another innovative method of merging theory with practice. They may be used, for example, to involve student teachers in decision-making situations where skills and knowledge must be used that normally would not be applicable until the first real teaching situation. Simulations have the advantage of providing a responsive environment and of telescoping time for the purpose of reducing and managing reality.

---

* Associated Organization for Teacher Education. "Instructional Technology in Teacher Education." (Washington, D.C., 1970.) ERIC ED 050050

** Cruickshank, D. R. "The Nature of Simulations and Games." Educational Technology 12, pp. 17-19, July 1972.

On the other hand, simulations require specialized materials and small groups and may be costly in terms of consumable resources and labor.

The NSPPT data may be compared with data collected by the AACTE/ETS* in 1973, as shown in Table 9.

TABLE 9

USE OF SIMULATIONS IN TEACHER EDUCATION PROGRAMS
AGGREGATE UNITED STATES

	AACTE 1973	NSPPT 1975
Percent of Teacher Education Programs Using Simulations	61.0%	31.8%

The data indicate that simulations have declined considerably in frequency of use since 1973.

2. Human Relations Training

Critics such as Nash** have expressed the view that the teacher education curriculum is not concerned enough with liberal education, specialized knowledge in an academic area, the values and attitudes of the trainee, or the dilemmas of the larger society within which the school is located. Nash speaks for the need of training programs which confront the reality of values, attitudes, and social crises as well as provide students with the basic skills they will need in the classroom.

---

* Sherwin, S. S. Op. cit.

** Nash, R. J. "Commitment to Competency: The New Fetishism in Teacher Education." Phi Delta Kappan 52, pp. 240-243, December, 1970.

Innovative programs have been incorporated into the curriculum of some teacher education programs which deal with the affective side of prospective teachers. Such programs -- often termed sensitivity training, group dynamics, awareness training, or human relations training -- generally attempt to help clarify the values and attitudes of individual students and to help the student understand how he relates to others.

A comparison of the NSPPT data with those collected by Johnson* in 1968 is shown in Table 10.

TABLE 10

USE OF HUMAN RELATIONS TRAINING IN TEACHER EDUCATION PROGRAMS

	Johnson 1968	NSPPT 1975
Percent of Teacher Education Programs Using Human Relations Training	14.0%	18.1%

The data would indicate that human relations training has made relatively little penetration into American teacher education.

---

* Johnson, J. A. Op. cit.

3. Use of Video or Audio Tape Recorders

Bailey* reports on recent experiments with video materials at the University of Nebraska and Kansas State University in the credential profile -- a new method for helping place teachers in the field. Called the Video Credential Profile, it includes: (1) videotaped personal interview of the candidate with college or university personnel; (2) videotaped micro-demonstration of the candidate's previous teaching performances. Segments include teacher performance of set, closure, questionning, and reinforcement skills, and the (3) traditional written profile.

Other institutions have used both video and audio tapes to give an added dimension to many aspects of teaching besides previously discussed innovations such as microteaching and simulation.

A comparison of NSPPT data with Johnson's 1968 data is found in Table 11, below.

TABLE 11

USE OF VIDEO AND AUDIO RECORDERS IN TEACHER EDUCATION PROGRAMS

	Johnson 1968	NSPPT 1975
Percent of Teacher Education Programs Using Video And/Or Audio Tape Recorders	31.0%	35.0%

---

* Bailey, G. D. "Can Videotaped Credentials Revolutionize Teacher Placement". Educational Leadership 31, pp. 457-459, February, 1974.

The data would indicate that the use of video and audio tape recorders has been relatively stable over the seven year period, involving about one-third of the teacher education programs.

4. Techniques for the Analysis of Classroom Interaction

The analysis of classroom interactions between the teacher and pupil has its roots in the work of social psychologists in the 1940's in the effects of teacher behaviors on learning. A large body of literature on this subject has since developed; in support of this, a variety of techniques for the measurement and analysis of these interactions have also been developed.

Mirrors for Behavior, published by Research for Better Schools, Inc. (one of the NIE regional labs) describes 79 separate interaction analysis techniques and contains over 700 references to studies employing them.

The NSPPT data on the frequency of use of interaction analysis may be compared with both those of the AACTE/ETS (1973) and Johnson (1968), as shown in Table 12.

TABLE 12

USE OF INTERACTION ANALYSIS TECHNIQUES IN TEACHER EDUCATION PROGRAMS

	Johnson 1968	AACTE/ETS 1973	NSPPT 1975
Percent of Teacher Education Programs Using Interaction Analysis Techniques	10.0%	55.0%	71.4%

Clearly, interaction analysis techniques have grown to a point of wide acceptance in teacher education in the past seven years.

5. Bloom's Taxonomy of Educational Objectives

The teacher must target instruction to meet a variety of learning objectives for his/her pupils. Although all children are unique, there are aspects of learning which are sufficiently similar to permit the construction of taxonomies which, like their botanical counterparts, permit the classification of educational outcomes in a useful fashion. Bloom* and Bloom and Krathwohl** developed taxonomies of both the cognitive and affective domains of children's behaviors. These taxonomies have been used in a variety of ways to plan, conduct and evaluate instruction:

- It is possible to develop a lesson around sets and sub-sets of objectives.
- It is possible to construct tests based on the taxonomy.

Thus, Bloom's taxonomy is a form of tool which has the potential for serving the teacher's day-to-day information processing needs much in the same fashion as the Linnaen Taxonomy serves the botanist or biologist.

The NSPPT gathered information about the use of Bloom's Taxonomy. These data are shown in comparison with those gathered by Johnson (1968) in Table 13.

---

* Bloom, B. Taxonomy of Educational Objectives: Cognitive Domain. (New York: McKay, 1956.)

** Bloom, B. and Krathwohl, D. Taxonomy of Educational Objectives: The Classification of Educational Goals. (New York: McKay, 1964.)

TABLE 13

USE OF BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES IN TEACHER EDUCATION PROGRAMS

	Johnson 1968	NSPPT 1975
Percent of Programs Using Bloom's Taxonomy	16.0%	52.1%

Thus, Bloom's Taxonomy has increased in frequency of usage over the seven year period from 1968 to 1975.

The Federal government, through both the Office of Education and the National Institute of Education, has encouraged the dissemination and use of innovative practices in teacher education. The NSPPT was designed to build upon both the Johnson (1968) and AACTE/ETS (1973) surveys to track the use of such innovations. The results suggest that:

- Labor-intensive (and, hence, costly) innovations such as microteaching and simulation have decreased in usage, after an apparent surge in popularity.
- Interaction analysis (e.g., Flanders system) and Bloom's Taxonomy have moved from experimental status to wide-spread usage. Both of these systems are characterized by low cost, ease of transfer from one type of classroom to another, and absence of expensive equipment.
- Sensitivity training has made little or no penetration into teacher education since 1968.

APPENDIX

TECHNICAL DESCRIPTION OF THE STUDY

TECHNICAL APPENDIX

Source of Data

The purpose of the National Survey of the Preservice Preparation of Teachers was to obtain reliable national estimates of the supply of education personnel, and to provide detailed information about the characteristics of programs, students and faculty involved in preservice education. The survey is intended to provide information about preservice teacher-training as offered in the nation's 1151 schools, colleges and departments of education. The estimates appearing in this report are based on data collected from four separate samples of:

- 240 institutions which prepare teachers
- 505 separate teacher preparation programs
- 3600 students in their final year of teacher preparation
- 480 full-time education faculty.

The sample of institutions was a single stage stratified random-sample allocated proportional to the production of teachers in AY 1970-1971, the most recent data available during the survey design period.

All distinct teacher education programs (e.g., elementary, secondary, special education, etc.) within an institution were asked to complete a questionnaire, and thus constitute a stratified sample of programs.

Each institution was asked to construct a random sample of 15 students and 2 faculty. Thus, the samples of students and faculty constitute a two stage stratified sample.

The stratification variates are described below:

A. Control

1. Public
2. Private

B. Institution Type

1. Universities: Institutions which offer a wide variety of programs at both undergraduate and graduate levels and professional training in medicine and law.

2. Comprehensive Colleges: Institutions which offer programs at the undergraduate and graduate level with no professional training in either medicine or law.

3. Liberal Arts Colleges: Institutions which offer primarily undergraduate programs with the occasional graduate program not exceeding the **master's** level.

C. Size with respect to teacher preparation

1. Small: 0-100 teachers prepared in 1971
2. Medium: 101-500 teachers prepared in 1971
3. Large: more than 500 teachers prepared in 1971.

The sample was selected from a universe list carefully prepared for this study by cross-referencing data from the NCES EDSTAT system with the membership lists of professional organizations. With the assistance of Dr. Egon Guba of Indiana University, the population list was verified by a mailing to all state directors of teacher education and certification.

Cornell's method* was employed to fix the sample size to seek a five percent coefficient of variance at ninety-five percent (two sigma) confidence.

Survey Procedure

Instrument design was based on an extensive review of the literature and interviews with over 100 key educational decision-makers representing federal and state governments, institutions of higher education, commissions, and professional organizations. The instruments were subjected to field-test and extensive review by both the NCES and the OMB.

Instruments were mailed during November of 1975. A national network of regional representatives was employed to encourage response to the survey and to solve technical problems associated with the study.

Wnere applicable, two follow-up letters were sent to institutions and a final telephone contact **was** employed to obtain the overall 82% rate of participation in the survey.

---

*Cornell, F. G. A Stratfield Random Sample of a Finite Population. Journal of the American Statistical Association 42, 523-532

Manual and machine editing of the forms were used to check the data for accuracy, consistency, and response within limits. The estimation procedure involved in the study involved two steps:

- Adjustment for nonresponse using the method of random replacement*

- Inflation of the data by the inverse of the school's probability of selection

Table A-1 shows the number of institutions in the universe and both the expected and obtained response to each of the survey instruments.

Reliability of the Estimates

Since the estimates in this report are based on a sample, they differ somewhat from the figures that would have been obtained from a complete census using the same forms and proceedures. Particular care should be exercised in the interpretation of figures based on a relatively small number of cases as well as small differences between estimates. As is common to all survey work, the results are subject to errors of response and nonreporting as well as those due to sampling variability.

The standard error is the measure of sampling variability - that is, of the fluctuations which occur because a sample rather than the whole of the population is surveyed. As calculated for this report, the standard error also partially measures the effect of certain response and processing errors, but it does not measure any systematic biases in the data. The chances are 68 out of 100 that an estimate from a sample would differ from a complete census

---

*C.F. M.H. Hansen, et. al. Sample Survey Methods and Theory (Vol. I) figure by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error.

The figures presented in Tables A-2 through A-5 represent the standard errors for key data contained in this report.

TABLE A-1

RESPONSE TO THE SURVEY BY TYPE OF INSTITUTION

			INSTITUTION PART I			INSTITUTION PART II			FACULTY			STUDENT			PARTICIPATION BY INSTITUTION	
			Expected	Received	Percent Response	Expected	Received	Percent Response	Expected	Received	Percent Response	Expected	Received	Percent Response	Number Partici-pating	Percent partici-pating
All Strata Combined			240	162	67	-	551	-	472	419	88	3,540	2,292	63	1,958	82
unusable			-	2	8	-	6	-	-	41	9	-	129	4	5	2
UNIV.	PUB	I	2	2	100	-	5	-	4	4	100	30	15	50	2	100
		II	25	19	76	-	65	-	50	62	124	375	231	70	22	88
		III	30	25	83	-	120	-	60	58	87	450	351	68	27	90
	PRI	I	5	5	100	-	7	-	8	9	113	60	53	88	5	100
		II	7	2	29	-	9	-	14	8	57	105	36	34	4	57
		III	4	3	75	-	4	-	8	5	63	60	17	28	3	75
COMP. COLL.	PUB	I	7	5	71	-	14	-	14	12	86	105	27	26	5	71
		II	79	48	60	-	190	-	158	114	-	1,185	798	62	61	77
		III	19	12	63	-	42	-	38	34	89	285	181	64	16	84
	PRI	I	8	5	63	-	6	-	14	6	43	105	31	30	5	63
		II	17	9	53	-	33	-	34	21	62	255	143	56	13	76
LIB. ARTS	PUB	I	2	1	50	-	1	-	4	1	25	30	8	27	1	50
		II	5	2	40	-	2	-	10	6	60	75	42	56	3	60
	PRI	I	22	14	64	-	23	-	44	26	55	330	153	52	15	68
		II	8	8	100	-	24	-	12	12	100	90	77	86	8	100

TABLE A-2

STANDARD ERRORS FOR KEY ESTIMATES BASED ON THE QUESTIONNAIRE FOR INSTITUTIONS, INCLUDING VALUES OF EACH ESTIMATE AND COEFFICIENT OF VARIATION (C.V.)

		OVERALL	PUBLIC	PRIVATE	UNIVERSITY	COMPREHENSIVE COLLEGE	LIBERAL ARTS
NUMBER RESPONDING		166	114	46	56	79	25
ENROLLMENT AY 1975-1976	ESTIMATE	485208	339309	145889	105285	300184	79738
	STD ERROR	10189	9161	7149	7265	12608	6618
	C.V.	0.021	0.027	0.049	0.069	0.042	0.083
BACHELOR's DEGREES WITH CERTIFICATE AY 1972-1973	ESTIMATE	322424	202478	119946	67064	197323	58037
	STD ERROR	10318	7694	6537	4895	4669	5339
	C.V.	0.032	0.038	0.053	0.073	0.049	0.092
BACHELOR's DEGREES WITH CERTIFICATE AY 1973-1974	ESTIMATE	295515	190283	105232	65183	182800	47532
	STD ERROR	8865	6660	5472	4563	8957	4325
	C.V.	0.030	0.035	0.052	0.070	0.049	0.091
BACHELOR's DEGREES WITH CERTIFICATE AY 1974-1975	ESTIMATE	258554	160545	98009	63731	158659	36164
	STD ERROR	7493	4977	5096	4525	7933	3255
	C.V.	0.029	0.031	0.052	0.071	0.050	0.090
TUITION AND FEES AY 1975-1976	ESTIMATE	981	592	1965	1058	746	1961
	STD ERROR	22	17	94	73	32	142
	C.V.	0.022	0.029	0.048	0.069	0.043	0.084